DETERMINANTS OF SELF-RATED HEALTH, MINORITY STATUS, AND ACCESS TO HEALTH SERVICES AMONG OFFICIAL LANGUAGE MINORITY OLDER ADULTS IN CANADA

A Thesis Submitted to the College of

Graduate Studies and Research

In Partial Fulfillment of the Requirements

For the Degree of Doctor of Philosophy

In the Department of Community Health and Epidemiology

University of Saskatchewan

Saskatoon

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ABSTRACT

Studies in countries across the globe and in Canada show that people from minority communities generally tend to be in poorer health, experience a greater burden of disease and disability than the general population. A 2008 World Health Organization (WHO) report on the Social Determinant of Health stressed that the high burden of disease and disability around the world is due to a great extent, to poor and unequal living conditions which are the consequence of deeper structural conditions such as poor social policies and programmes, inequitable economic structures, and deficient politics. In Canada, there is a growing body of evidence suggesting a negative impact of health disparities on Official Language Minority Communities (OLMCs), especially on Francophones outside of Quebec.

In order to better describe and understand the situation of Official Language Minorities (OLMs), especially of Minority Francophone older adults living outside of Quebec, two national surveys were used: The 2006 Canadian post-census Survey on the Vitality of Official Language Minorities (SVOLM) and the 2007 Canadian Community Health Survey (CCHS). Descriptive, and multivariable analyses were conducted, followed by minority Francophone community members' feedback on the findings. A qualitative analysis of provincial/territorial French-language (English in Quebec) services policies or legislations was subsequently conducted with an in-depth focus on the Government of Saskatchewan French-language Services Policy and an assessment of the potential impact of these policies on the health of OLM older adults.

This study showed that minority Francophone older adults consistently rated their health more poorly than their counterparts in the general population but the study failed to demonstrate an association between OLM status and self-rated health, due to low representativity of the OLM population in the sample. However, the sense of belonging to, and vitality of minority

community were constructs associated with better self-rated health for minority Francophone older adults while high concentration of minority group was associated with poorer self-rated health. Feedback from Francophone community members emphasized the detrimental role of assimilation, systemic and structural inequities, and unfavourable policies as contributing significantly to the low vitality of their communities and eventually to health disparities. Adopting new sampling approaches for OLMs, addressing minority Francophones' contextual realities, enhancing access to health services in French, improving the linguistic environment, and developing more supporting policies, would help improve the condition of minority Francophone older adults in Canada.

ACKNOWLEDGMENTS

I express here my heartfelt gratitude to all who have helped me along the way on this highly challenging and deeply rewarding academic endeavour.

Chief among those people is my supervisor, Dr Anne Leis. You have guided me throughout this endeavour with insights, rigor, patience, and gentleness. As a result, I am a better researcher. I am indebted to you for what I have learned and how much I have grown during these past six years. I would like to thank the members of my advisory committee: Dr Bonnie Janzen in her role as committee chair, Dr Wilfrid Denis, Dr Chandima Karunanayake, Dr Cory Neudorf, and the late Dr Allen Backman. Without your guidance, this work would not have been completed. I am very grateful for your help, support, and encouragement.

I thank Dr Marie Drolet from the University of Ottawa, for agreeing to be my PhD external examiner and for generously sharing your expertise in examining and evaluating this thesis.

I am indebted to the Réseau de recherche Interdisciplinaire sur la Santé des Francophones en situation minoritaire (RISF) and the Canadian Institutes for Health Research (CIHR) for their financial support that made this research possible.

I would like to thank Statistics Canada and the University of Saskatchewan Research Data Centre (RDC) for making the data available to us and the long hours spent analyzing the data without having to travel.

My gratitude goes to Dr Nazeem Mujaharine, all the professors and staff, and fellow students in the Department of Community Health and Epidemiology of the University of Saskatchewan's College of Medicine. Thank you for your support during these long years of study and doctoral research.

I am indebted to the Fransaskois community and the minority Francophone community across Canada for offering feedback and being a sounding board for this research, and for helping move this research from academia to the community. Your feedback and insights helped understand some of the challenges of being an Official Language Minority Community and bring some hope to these challenges.

Thanks to the Rev Frances Schmidt, Dr Pamela Giles, Allan Stamler, and Dr Lynnette Stamler whose friendship, help, love, and support meant a lot to me.

Thank you to the Lutheran Theological Seminary community including the Rev Dr Kevin Ogilvie, the Rev Dr Cameron Harder, the Rev Dr Gordon Jensen, the Rev Dr Kristine Ruffatto, the Rev Dr Jann Boyd, Dr Christian Eberhart, the Rev Dr Faith Rohrbough, and Bishop Cynthia Halmarson, for their support and encouragement.

I express my deepest gratitude to the congregations of Carrot River Valley Lutheran Church in Fairy Glen, SK, Beaver Creek Lutheran Church in Ratner, SK, and all the members of Resurrection Lutheran Church in Saskatoon, SK for enabling me to pursue this endeavour and being able to complete it. Special thanks to Elaine Leite and Rachel Buchholz.

Thank you to Rev Ernie Hinojosa, Rev Barbara Groote, Rev Dr Chris Nojonen, Rev Kristin Soveran, Rev Janet Kostyna, Judy Baueriss, Rev Philip Penrod, Rev Linda Hall, Rev Mark Hedlin, Rev John Dut, Rev Hugh & Angie Farmer, Rev Dan Haugen, Rev Chris Bishopp, Rev Michael Poellet, Rev Renita Falkenstern, Rev George Hind, Rev David Hunter, Rev Harley Johnson, Rev Harold & Elaine Hesje, Rev Ron Bestvater, Rev Randy Meissner, Rev Jason Anderson, Rev Dr Ken & Val Neumann, Seminarians Olivier Ravelojaona and Shane Hein, and all my many friends and colleagues for their support and friendship as we serve in ministry together.

Thank you to Linus Luki, Denis Tassiako, Dr Hortense Nsoh Tabien, Virginie Tomppe, Flora Tabien, Guy Gérard Ngako, Richard & Rose Azinwi, Kenneth Saa Fon, Paul Hiol, Dr Serge Ndzonde, Liliane & Thomas Famawa, David Kafack, Dr Apollinaire & Clarisse Tsopmo, Drs Adeyemi & Foluke Laosebikan, Michel Tapi, Hilaire Chugoualé, and Pierre Penté for your friendship. Thank you to the members of the Cameroonian community in Saskatchewan.

Thank you to my spiritual father the Rev Timothée Tchouala, my mentors the Rev Florence & the Rev Dr Isaac Kamta, and my godchildren: Honoré Mépomnoé, Mireille Mafo, David Tabien, and Daniel Tabien. Thank you to Henri & Judith Pieumi.

I thank my parents Bernadette & Daniel Toté, Marie & Matthias Bassangna, Edna & Ron Bjorgan, as well as Maria and the late Fred Gruber, for their steadfast encouragement, nurturing love, and support. I thank my siblings and their spouses: Jacques & Rachel Toté Noussi, Eglantine Toté Mogom, Dortine & Michael Ryssen, Franklin Toté Fongang, Sandrine & Christophe Tépa, Raoul Toté Ndjede, Fabrice Toté Tchoufack, Mariane & Prince Tchakounté, Luc & Lorette Mayang, Véronique Apéma, Jean-Yves Bassangna, Michèle & Ferry Matrou, Mireille Badia, Mariane Badia, Erik & Marla Bjorgan, Kristi & Alex Witt, and Sarah & Jonathan Bjorgan.

I offer a very special gratitude to my beloved and beautiful wife Dominique and our two lovely children Éva-Marie and Marcelle Anne for their steadfast support, love, patience, encouragement, sacrifice, and the hope they gave me. This work would not have been done without them.

Finally, I am infinitely grateful to Jesus Christ my Lord and my Saviour, who guides my every step, and blesses me with all the people who have helped me along the way on this academic and research endeavour. To God, I say, Thank you.

DEDICATION

I dedicate this thesis first and foremost to my beloved and lovely wife Dominique and our wonderful and precious children Éva-Marie and Marcelle Anne, to my parents Bernadette and Daniel Toté, my parents-in-law, Marie and Matthias Bassangna, and finally to my Canadian parents Edna & Ron Bjorgan, and to Maria & Fred Gruber.

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LIST OF ABBREVIATIONS

CAI	Computer Assisted Interviewing
CCHS	Canadian Community Health Survey
CMA	Census Metropolitan Area
CSDH	Conceptual framework for action on the Social Determinants of Health
IC	Index of Concentration
LICO	Low Income Cut-off
NHS	National Household Survey
OLM	Official Language Minority
OLMs	Official Language Minorities
OLMC	Official Language Minority Community
OLMCs	Official Language Minority Communities
P-P Plot	Probability – Probability Plot
RDD	Random Digit Dialing
Ref	Reference
SDH	Social Determinants of Health
SPSS	Statistical Package for the Social Sciences
SSF	Société Santé en Français
SUDAAN	Survey Data Analysis software
SVOLM	Survey on the Vitality of Official Language Minorities
ZPRED	Standardized Predicted values
ZRESID	Standardized Residuals

LIST OF PUBLICATIONS AND PRESENTATIONS

FROM WORK PRESENTED IN THIS THESIS

Abstract and Posters:

Alimezelli HT, Leis A, Karunanayake C, Denis W. Self-rated Health: Comparing Official Language Minority Seniors with their counterparts in the general Canadian population Canadian Society for Epidemiology and Biostatistics (CSEB) Student conference. May 13-14, 2012, Saskatoon, SK

Alimezelli HT, Leis A, Karunanayake C, Pahwa P, Denis W, Backman A, Janzen B. Characteristics and determinants of self-rated health of minority francophone seniors living in Canada and their access to health services in French. The World Congress of Epidemiology Conference, August 7-11, 2011, Edinburgh, Scotland. Published in the *J Epidemiol Community Health* 2011;65:A455 p.73

Alimezelli HT, Leis A, Karunanayake C, Denis W. Characteristics and Determinants of Self-rated Health of Minority Francophone Seniors living in Canada and their Access to Health Services in French. Presented at the 20th IUHPE world conference on Health Promotion. July 11-15, 2010, Geneva, Switzerland.

Alimezelli HT, Leis A, Karunanayake C, Denis W. Characteristics and Determinants of Self-rated Health of Minority Francophone Seniors living in Canada and their Access to Health Services in French. Presented at the "Science Colloquium: the Health of Canada's Official Language Minorities". November 5-6, 2009, Ottawa, ON.

Selected Presentations:

Policies, policy regimes, and health disparities among minority Francophone older adults in Canada. March 2014
Health, Wellness, & Society Conference, Vancouver, BC

Minority status and self-rated among seniors in Canada Nov 2013
"Our Future is Aging" Conference. Halifax, NS

Facteurs liés à la santé perçue des ainés francophones en situation minoritaire au Canada. Nov 2012
"Société Santé en Français" conference. Ottawa, ON

La santé des ainés en milieu minoritaire francophone May 2012
Forum Santé du *Réseau Santé en Français de la Saskatchewan*, Saskatoon, SK

Determinants of Self-rated Health among Official Language Seniors

Living in Minority Situation in Canada. June 2011
4th International Colloquium on local and regional health programs. Ottawa, ON.

Television interview with CBC – French. Aug 19, 2013
Invited response to a national report showing increasing challenges for elderly care in Canada responding to how this may affect Official Language Minority older adults. Société Radio-Canada (CBC - French). 6 PM News Saskatchewan.

Upcoming:

Disparities, health services policies, and Minority Francophone Older Adults in Canada. May 2014
QICSS International Conference on Social Policy and Health Inequalities. Montreal, QC

From research to policy: Canadian Francophone minority older adults and health disparities. May 2014
CSEB National student conference, Hamilton, ON.

<u>Published Articles in peer reviewed journals:</u>

Alimezelli HT, Leis A, Denis W, Karunanayake C. Determinants of Self-rated Health of Francophone Seniors in Minority Situation in Canada. Linguistic Minorities and Society journal. December 2013.

Dupuis-Blanchard S, Villalon L, **Alimezelli HT**. Vieillir en santé en situation minoritaire linguistique au Canada: enjeux, défis et mobilisation collective. Global Health Promotion journal. April 2014.

1. General introduction

1.1. Francophone minority older adults: twice as vulnerable

Older adults in general are a vulnerable population. They face more health challenges such as chronic conditions or acute illnesses than the general population. Among the elderly population 65 and over, falls account for over 85% of injury hospitalization, which is significantly higher than in the general population.[1] Other factors that increase older adults' vulnerability are social isolation and loneliness.[2] Older adults are often widowed or are separated from their spouses in nursing homes.[3] This vulnerability is compounded by the fact that most older adults live on fixed incomes which may affect their mobility (cost of convenience of transportation) and hence their ability to socialize. Living on a fixed income may also affect their ability to make healthy food choices and increase or maintain their physical activity.

Minority status has also been shown to predispose individuals to low access to health services and adverse health outcomes. Research has shown that minority status is associated with poor adherence to treatment regiments.[4] For example, studies in the U.S. have demonstrated that ethnic minorities have lower rates of participation in prevention programs than the general population.[5] Lack of insurance coverage, cultural beliefs and practices, systemic discrimination, and low socio-economic status have been identified through research as contributing to such a discrepancy. More recently, language has been found to play a role in low access to and utilization of health services; however the extent to which such a role is significant has not been well researched.[6] Some studies exploring its significance compared ethnic groups and found that language was the likely factor that would account for the differences in use of health services. A study in the U.S. investigating the utilization of screening mammography found that Hispanic women were less likely than black or white women to have a mammogram.5 Even among

Hispanic women, those with knowledge of English were more likely than those who did not speak English to have had a mammogram. Similarly, another study found that participation of minority women in cancer screening was linked to whether they understood the test and procedure.[7] Language of administration was highly associated with participation in the screening program.

Francophone minorities in Canada have recently been more vocal about the barriers they face for accessing any service in French which might touch on any aspect of their lives. The health sector constitutes no exception as health services tend to be offered only in English or first in English within all provinces and territories except Quebec. This, it is argued, may limit Francophones in their access to health services and adversely affect their health. While older adults in general are a vulnerable population, these added socio-linguistic challenges when attempting to access health services in French place Francophone older adults in an even more disadvantaged situation. This doctoral research contributes therefore to the emerging body of evidence which examines the relationship between older adults' Official Language Minority status and their self-rated health.

1.2. Disparities in access to services despite Canada's linguistic duality

Canada is a country with two official language communities of equal status in the Canadian constitution, the French-speaking and the English-speaking communities.[8] Francophones in all Canadian provinces and territories except Quebec and Anglophones in Quebec live in a minority situation that does not always allow them to experience the same level of vitality as does the French-speaking majority population in Quebec and the English-speaking majority outside Quebec. Enhancing the vitality of Official Language Minorities is a key

component of the Official Languages Act.[9] Under the impetus of this act, the Canadian government developed its Official Language Minorities Action Plan in 2003 with focus on areas such as family life, education, health, early childhood and language use.8 With regards to health, the Action Plan states that Francophones and Anglophones in minority communities should have better access to health services in their language through networking, through bilingual training of health professionals and through making primary care centres a priority.8 Building on the 1990 World Health Organization (WHO) model "toward unity for health" and under the leadership of Société Santé en Français (SSF) outside of Quebec, and the Community Health and Social Services Network (CHSSN) in Quebec, the networking of various stakeholders (health professionals, communities, managers of health care institutions, educational institutions and governments across the country) has helped raise awareness about health concerns Official Language Minority Communities (OLMCs) face.[10]

The Canadian healthcare system has as a key goal to make healthcare access and use available to its citizens without discrimination. That is why it is called "universal". If Francophones in a minority situation have less access to health services because of their linguistic minority status, this violates both the objective of Canada's universal healthcare system – especially given the linguistic duality of the country – and the Canadian Charter of Rights and Freedoms. This official and constitutionally recognized linguistic duality should reasonably guarantee access to services in both official languages but the reality seems to be one of poor access to health services in their language by OLMC members.

In a context where access to health professionals and services is more and more difficult due to a general shortage of physicians, nurses, and other allied health professionals, the lack of providers speaking the language of Official Language Minorities constitutes an additional hurdle

that further compounds the problem of access and use of health services in the Canadian healthcare system.[11] The scarcity in health services available to these communities in minority status across the country as opposed to the majority population might be one of the causes of lack of access and use of health services. This in turn may accentuate the disparity in health status.

In the Canadian government's policy document entitled "Roadmap for Canada's Linguistic Duality 2008-2013: Acting for the Future", Prime Minister Stephen Harper declares:

> Linguistic duality is a cornerstone of our national identity […]. Recognizing this, our government is committed to strengthening this duality by providing support for English and French minority-language communities and by taking action to ensure that Canadians can obtain government services in both official languages.[12]

In this roadmap, the five priority sectors over five years included health, particularly access to health services by Francophone and Anglophone minorities. Within these populations, the government plan further focused on vulnerable groups such as children, youth and the elderly. This demonstrates from both a general and policy analysis perspective that access to and utilization of health services by all and particularly by vulnerable groups is an important Canadian issue. In addition, one of the questions worth exploring is why in light of the federal government's "official language roadmaps", disparities between the OLMC members and the general Canadian population continue to exist and even to increase. By focusing on Francophone older adults in a minority situation, this research responds to a burning Canadian issue and need.

As a result, this work is part of the research effort that seeks to strengthen the body of evidence needed to understand factors that contribute to, or impede the vitality, health and wellbeing of Official Language Minority Communities in Canada. With its focus on older adults, this research is expected to contribute to the scientific knowledge in a context where the

Canadian population is aging very rapidly. A better understanding of the health of older adults, and in this case, of Official Language Minority older adults, will help in responding appropriately to their needs.

1.3. Health of Official Language Minorities in Canada: An under-researched area

Research in the United States in particular has contributed significantly to what is known about the difficulties that linguistic minorities face in accessing and using health services. From U.S. research on Latinos, Blacks, and Asian-Americans for example, it is known that when compared to the general population, these groups have less access to health services.[7,13,14] American research has also linked the lack of access or insufficient access to health services to adverse health outcomes.[15] As a result of extensive research in this area, linguistic minorities in the United States are shown to generally and seemingly have poorer access to health services and consequently poorer health than the American general population.

In Canada however, research in regards to access to health services by linguistic minorities is very recent and has focused mostly on immigrants. Several reports have been published in Canada asserting that Francophone and Anglophone minority groups are in poorer health than the majority population and have reduced access to and use of health services than the general population.[16]

Research using the Population Health perspective has demonstrated that older adults confront an array of circumstances and factors such as injuries and chronic diseases that have an impact on their health status that make them vulnerable. The additional issue of language barriers and minority status faced by OLM older adults may render them even more vulnerable. The issue of language however, cannot be isolated as the sole determinant which single-handedly explains

the apparent lack of adequate access and utilization of health services by Francophone and Anglophone minorities. Environmental, social as well as geopolitical and public policy influences also need to be examined. It is more plausible that a combination of determinants act together negatively to produce the poorer access to and use of health services.

As a result, since very little research has been done in this area, this study focused on the perception by Francophone older adults of their state of health in order to assess to what extent it was associated among other factors, with the different variables of health services use. To that end, self-rated health was an important outcome variable to explore since it has been proven to be a good predictor of overall or evaluated health.[17] If Official Language Minority status is a predictor or a determinant of self-rated health among OLMCs, then it is important for federal, provincial, territorial, and regional health authorities in Canada to develop and/or implement policies that would enhance the vitality of these communities and make health services accessible in their language.

1.4. Timeliness of this research

This research is timely, given the current political will, interest, and investment of the Canadian government. The federal government pledged in their 2008-2013 roadmap for linguistic duality to invest by 2013 a total of $1.1 billion for Official Language Minorities, $280 million of which was to be committed towards the improvement of OLMCs health and access to health services.[8] In the 2013-2018 roadmap, a similar investment is promised.[8] This is a sharp contrast to over a decade ago when the interest in Anglophone and Francophone minorities was not a priority in Canadian politics.

In fact, for many years, the geopolitical focus in Canada has been on the two linguistically and culturally diverse majority groups, primarily for Francophones who settled in Quebec and for Anglophones in the rest of the country, with little attention paid to Francophone and Anglophone minority groups. Only recently has the complexity of issues such as inadequate access to services and declining vitality facing these linguistic minorities surfaced in the federal government political discourse and agenda[18]. Furthermore, with the Baby Boomers generation that represents an important segment of the Canadian population reaching the age of 65 in unprecedented numbers within the next decade, the government has made it a priority to anticipate and deal with issues affecting older adults in order to maintain and improve their health and wellbeing.[19,20,21,22]

These federal efforts are attracting support in provincial politics, with every province and every territory except British Columbia and Newfoundland and Labrador now having adopted some sort of legislation or policy to improve the vitality and access to services in the OLM language.[23] These efforts, which are not without their challenges, signal a time that is ripe for research to be undertaken in this area with findings more likely to meet attentive political ears and hence, lead to more targeted policies and action to improve the health of Official Language Minority communities in general, and minority Francophone older adults in particular.

1.5. Key assumptions and objectives

This research was guided by three assumptions. The first assumption is that Canadian Francophone minorities' self-rated health is highly correlated with the language of service. The language of service may either enhance the use of health services or inhibit it. This in turn may affect subsequent health service use and may lead to satisfaction or dissatisfaction with one's

health status. The second assumption is that within the Canadian Francophone population outside of Quebec, the discrepancy that exists with regards to access is more pronounced among older adults aged 65 years and over than in the rest of the Francophone minority population. In fact, minority Francophone older adults are more likely to face linguistic barriers than younger Francophones because of the younger generation's ability to speak English and hence, have easier access to services. Moreover, older adults are known to have a higher need for health services when compared to other age groups.[24] Adults over 65 tend to have more health issues than the general population and thus, are more likely to seek and access health services.[25,26] The third assumption is that policies play an important role in shaping the environment and in directly affecting the health of communities, including minority communities, and in this case, Official Language Minorities. Keeping in mind these three assumptions, the following four research objectives were identified for this thesis:

Objective #1: Identify, describe and characterize access to, and use of health services in French by older adults in Canada outside the province of Quebec.

Objective #2: Determine the factors associated with the self-rated health of Francophone older adults in a minority situation using the 2006 Canada post-census Survey on the Vitality of Official Language Minorities and compare these factors with those of the Anglophone minority population in the province of Quebec.

Objective #3: Compare self-rated health of older adults of Official Language Minority status with the general population of older adults using the 2007 Canadian Community Health Survey.

Objective #4: Based on research findings, community stakeholders' feedback, and the policy environment, provide recommendations for improved access to health services in French by Francophone minority older adults in Canada.

2. Conceptual Approaches

2.1. The Overarching Framework for Research on Canada's OLM Older Adults

The Overarching Conceptual Framework (Figure 2.1) that was created for this research on Canada's OLM older adults provides as further explained below, an integrated scheme stemming from five different frameworks or conceptual models namely: the Constitutional Framework for Official Languages, Health Canada's Population Health approach, the Andersen Health Services Utilization Model, the WHO Conceptual framework for action on the Social Determinants of Health (CSDH), and Rossell's Framework of Criteria for Evaluating Public Policies.

As shown in Figure 2.1 below, the overarching framework is presented in the form of two concentric circles and four overlapping circles. The larger concentric circle represents Canada's Linguistic Duality arising from its legal and constitutional framework and on which this research is founded as outlined below. The smaller circle at the centre represents the OLMCs and their goal of health and equity examined in this study. The four overlapping circles represent the remaining four conceptual models that are part of this research. The Andersen, Population Health model, the CSDH, and Rossell's model are conceptual models that are all interrelated, and which integrate dimensions of each other in this research towards the goal of health and equity for OLM older adults. The key contribution of each conceptual model to the overarching framework hence, to this study, is highlighted within each circle.

This Overarching Conceptual Framework emerged in the dynamic and unfolding process of this research in order to bring together the different frameworks and models used at various stages of the research process. With this research touching so many different areas from variable selection to the field of policy evaluation, via statistical analysis, stakeholders' consultation,

health disparities and social inequities, each area of interest and the nature of the questions being explored, called for an appropriate conceptual lens in order to gain greater insights.

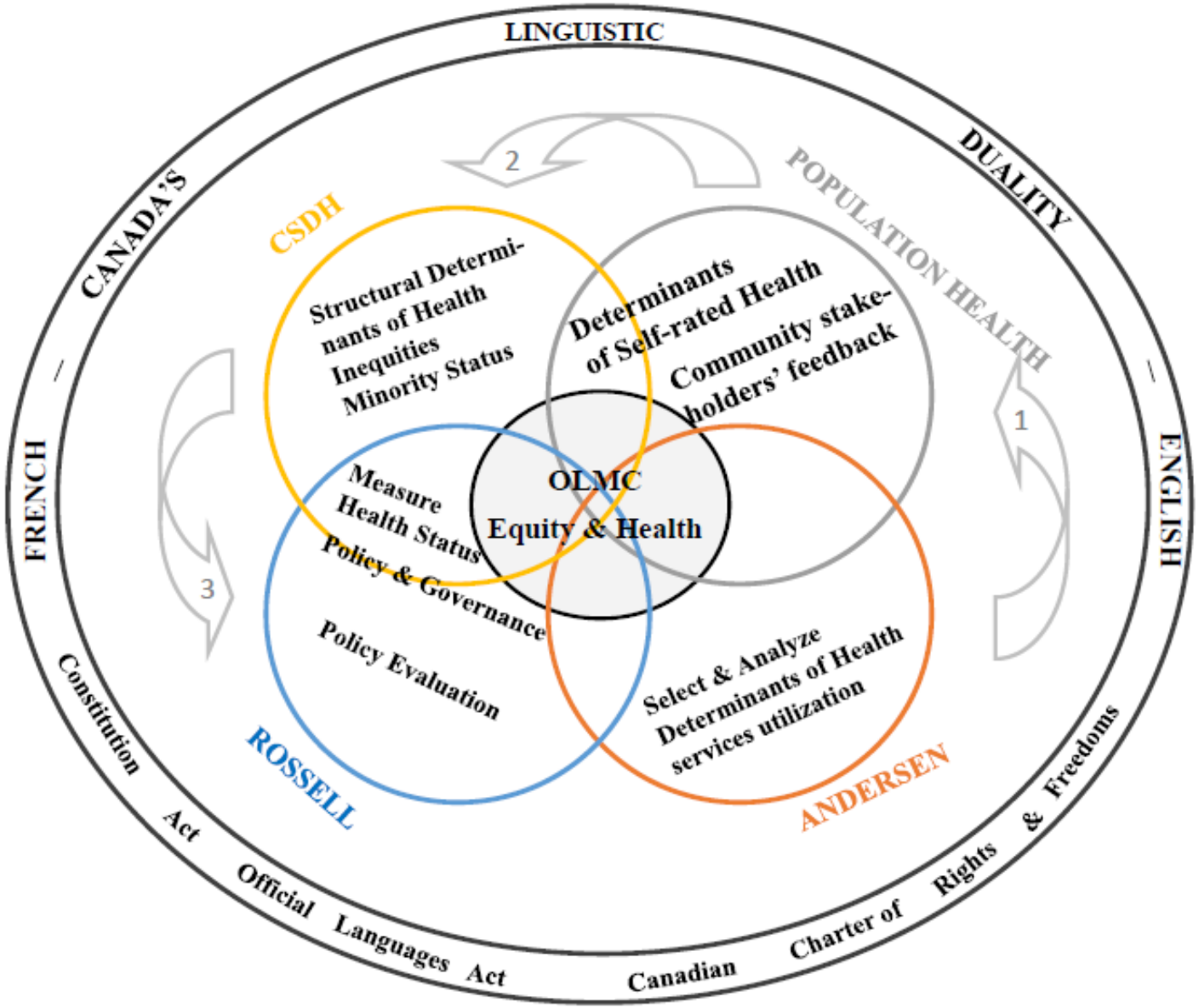
This Overarching Conceptual Framework is warranted since every major stage of this research required a particular conceptual lens. The arrows in the overarching framework as seen in Figure 2.1 and numbered from one to three, represent the general sequence in the use of the individual conceptual models in order to answer the research questions posed by each of this thesis' research objectives. Both the Population Health framework and the Andersen models contributed to initially conceptualize our research questions, design the study, and analyze research findings. The Andersen model was the first step in this dynamic and integrated process that enabled variable selection and analysis. The Population Health Approach was used to help with assessing the health status of OLM older adults, identifying the determinants of their self-rated health, and seeking community stakeholders' feedback on the findings. While the Population Health approach was instrumental in selecting key determinants of health, the WHO's CSDH Framework for Action which is at the heart of this research, enabled an in-depth focus on the structural determinants of health inequities.

A valid question can be raised as to why the use of both the Population Health model and the CSDH Framework for Action when the latter is an improved and more complex version of the former. The iterative nature of this research meant that we started with a Population Health model initially before the publication of WHO's CSDH Framework for Action. However, once the CSDH Framework for Action was published, we integrated it, even if this research project was well underway, since it strengthened significantly the focus on the structural and systemic determinants of health disparities. Additionally and of paramount importance, the CSDH assisted in appraising the impact of policy and governance on OLMCs and the disparities negatively

affecting them. Application of the CSDH demonstrated the impact of policy on health outcomes and led us to search for deeper consideration of policy and policy regimes on health, such as with the Rossell model. Utilization of the Rossell model provided a tool to better analyze how the different policies can impact on health disparities between OLM older adults and the general Canadian population of older adults.

Each of the conceptual models is presented below in greater detail in order to further explain the Overarching Framework that was developed for this research. They are presented not in the order of importance, but according to the integrated and dynamic evolution of the research process as seen in the Overarching Framework.

Figure 2.1: Overarching Framework for Research on Canada's OLM Older Adults



2.2. Study Grounded in the constitutionality of Official Languages in Canada

This research takes place in the context of Canada's linguistic duality of English and French as Canada's two official languages. This linguistic duality comes with constitutional and legal guarantees that bestow equal status on French and English. As a result of this, Canada's Official Language Minority speakers, made up of Anglophones in Quebec and Francophones in Canada outside of Quebec, have reasonable expectations of services in their language.

Canada's constitutional structure is paramount in understanding the importance of access to (health) services in both French and English to Canadians and particularly Francophone and Anglophone linguistic minorities. Both the Canadian constitution of 1867 and the Charter of Rights and Freedoms (1982) specify rights and linguistic principles and recognize the equal status of Canada's two official languages in addition to the basic and fundamental equality of treatment of all individuals before the law. In this regards, section 15 of the Charter states that:

> Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical ability.[27]

After the Official Languages Act was enacted in 1969, the promotion of minority-language education and support for Official Language Minorities became a federal priority. In 1973, a parliamentary resolution made the government responsible for ensuring full participation in the federal public service of Anglophones and Francophones across the country. The revised Official Languages Act of 1988 further stressed the importance of offering federal services in both English and French. The preamble of the Act reaffirms the Canadian government's responsibility of ensuring that Anglophone and Francophone minority communities have access to services in their language as stated:

> The Government of Canada is committed to enhancing the vitality and supporting the development of English and French linguistic minority communities, as an integral part of the two official language communities of Canada, and to fostering full recognition and use of English and French in Canadian society.[28]

In addition, the Act states that one of its goals is to:

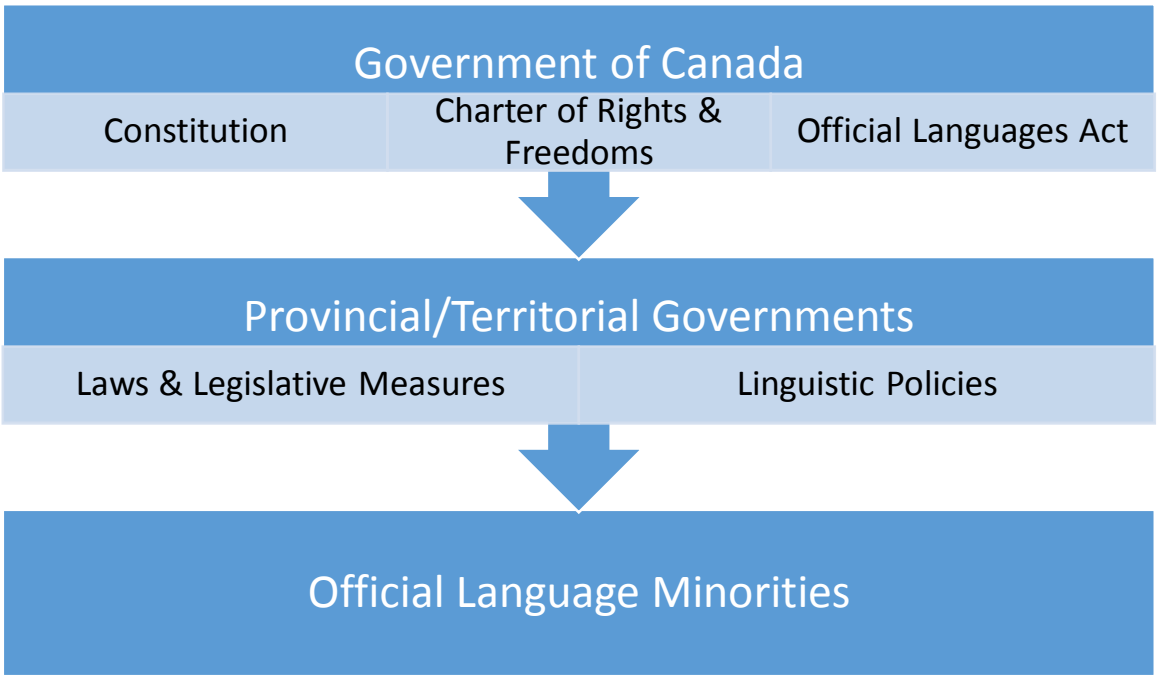
> Support the development of English and French linguistic minority communities and generally advance the equality of status and use of the English and French languages within Canadian society.[31]

Because access to federal services by Canada's Francophone and Anglophone populations is enshrined in the Official Languages Act, this has significant public policy implications. That is why the five-year Action Plan for Official Languages of 2003 - 2008 and renewed twice since then, for June 2008 through 2013 and from 2013 to 2018, seeks to ensure that the intent and the goals of the Official Languages Act become an increasing reality for Canadians and for Official Language Minorities. The 2003 Action Plan invested $119 million to provide better access to health services in the language of Anglophones and Francophones in minority communities. In the renewed 2008 plan, $174.3 million were earmarked for Health Canada for training, networks and access to health services with another $104.5 million earmarked for the 2013-2018 renewed period.[12,29] This investment emphasizes the importance and the legitimacy of access to, and use of health services in their language by Official Language Minority groups. As a result, Canada's linguistic duality provides the constitutional and legal framework within which this research takes place hence, validating and legitimizing this study as further explained below.

The following legislative framework (Figure 2.2) simplified for our illustrative purpose, shows how services are provided in the context of the laws and legislative measures as well as the roles of both federal and provincial/territorial governments. It does not account for the complexity of Canada's legislative framework. As an illustration of that complexity, the Constitution in Canada establishes a constitutional obligation for the federal government with regards to federal services, but also for Quebec and New Brunswick; and only for the sector of education (Section 23). Manitoba has also been constitutionally bilingual since 1870 (Manitoba Act). However provincial legislation in 1890 abrogated any provincial rights for the use of French in any provincial institution including the courts and the legislature. Although contested initially, it is only through two subsequent Supreme Court decisions in 1979 and 1985 that recognized a constitutional obligation regarding the use of French that Manitoba was ordered to comply with this obligation.[30] It is important to also remember that health services delivery in Canada is a provincial jurisdiction with the federal government providing funding.

Figure 2.2: Legislative Framework of Canada's Official Languages[31]

(Adapted from Canadian Heritage)



Canada's linguistic duality provides the constitutional and legislative framework for this research. It helps situate OLM groups as a particular type of minority different from other minority groups with a particular history and contribution to Canada's richness, a particular set of rights hence, a particular set of expectations from the various levels of government with regards to the provision of services.

In this research, we focused on access to health services in order to ascertain its impact on the health of OLM older adults in general, and minority Francophone older adults in particular compared to the general population. As a result, and in order to tease out the impact of access to health services on the health of OLMCs, the Andersen model, as seen below, was used.

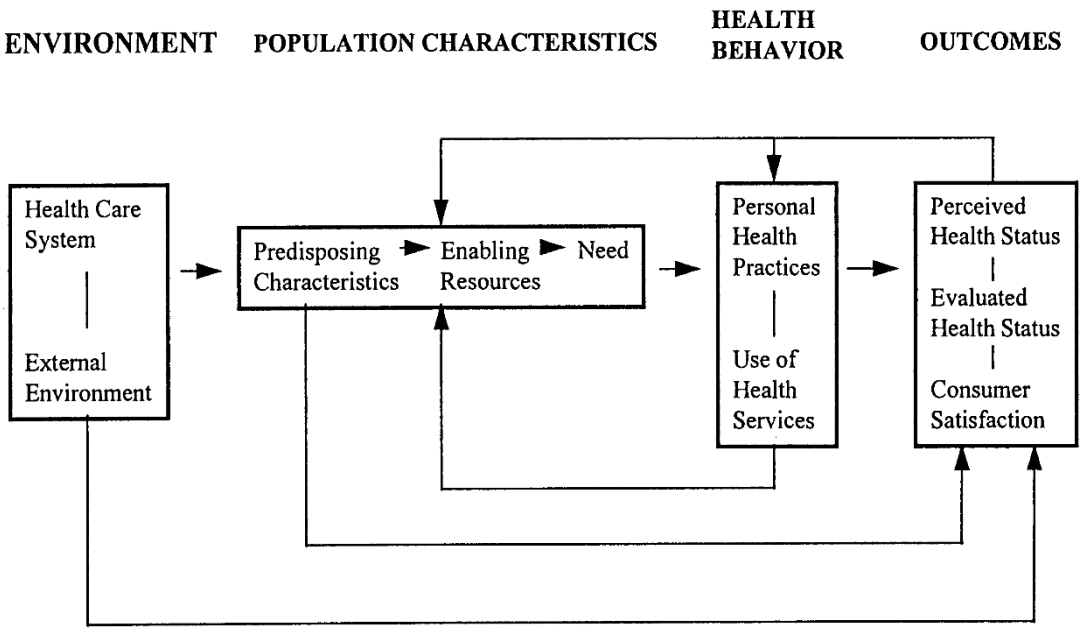
2.3. The Andersen Health Services Utilization Model

Andersen initially developed his Behavioural Model of Health Services Use (Figure 2.3) to better understand why health services are used, to define and measure equitable access, and promote equitable access policies.[32] Researchers originally focused on the family as the unit of analysis but due to the difficulty in ascertaining variables at the family level, they eventually moved to the individual as the unit of analysis. This model has become fundamental and the most widely used model in health services access and utilization research.[33] From the initial emphasis on societal and individual determinants, researchers have modified it to incorporate various levels of determinants that influence health services use. These levels also known as components, are the environment, population characteristics, health behaviour, and outcomes. It has been used in this research in addition to the Population Health approach because of its practicality in helping select the appropriate variables, fit them in the statistical model, and understand correlation paths between independent and dependent variables. Moreover, Andersen's Model of Health Services Utilization has been used successfully not only in the general population in the United States, in Canada, and around the world, but also with the older adult population, the subject of focus of this research.[34,35,36]

It should also be noted that Andersen developed the Health Services Utilization Model in the United States where health is under federal jurisdiction and where there was no universal national healthcare program except for national programs that target specific segments of the population such as Medicaid for certain low income individuals and families, and Medicare for the elderly and certain disabled persons. Most recently in 2010, the highly disputed and debated Patient Protection and Affordable Care Act also known as "Obamacare", has sought to increase access to health services on an even broader scale than previously achieved by Medicare and

Medicaid.[37,38] In the United States, the federal government is primarily responsible for the provision of healthcare with an overwhelming private sector role in the delivery of services. In Canada, the Federal government has a very limited role in that it provides only some funding with the provinces providing additional funding and administering and delivering health services to their respective populations. [39] This shows a healthcare system in the United States, significantly different from the Canadian context of universal healthcare, with Americans incurring significantly greater out-of-pocket healthcare expenses compared to Canadians.[39] Despite this contextual difference in healthcare system provision, delivery, and administration of services, the Andersen Model is still very useful in the Canadian context as found in this research.

Figure 2.3: The Andersen Health Services Utilization Model (Source: Andersen)[40]



The four main components of Andersen's Health Services Utilization model are presented here: the environment, the population characteristics, health behaviour, and outcomes.

2.3.1. The Environment

The Environment component of the model includes the health care system and the external environment. The health care system which consists of resources and organization, shapes the provision of health services. The external environment, which is a newer component of the model, recognizes that there are environmental factors other than the health care system that affect the availability and access to health services. The general economic health of the country, province, or region often has a significant impact on health services. Governments' policy choices more often than not affect the provision of health services as well. The recent adoptions of health services policies by provincial and territorial governments have been designed, intentionally in some cases, to have a positive impact on the provision of services to minority Francophone populations.

The environment component of the model can impact directly on, either, the outcomes or on the population characteristics. For example, a poor state of the economy could lead to drastic cuts in health services which could lead to poor consumer satisfaction. It could also affect the socio-economic status of care seekers and limit their access to health services.

2.3.2. Population Characteristics

The Population Characteristics component of the model is seen to directly impact on health behaviour which in turn influences the outcomes and vice-versa. The main population characteristics are: Predisposing Characteristics, Enabling Resources, and Need.

The Predisposing Characteristics are those that cause certain people to be more likely users of health care than others. For example, the elderly are known to use more health services than young people. Hence, age is a predisposing characteristic. Similarly, people who live in rural and remote areas tend to use health services less than urbanites usually as a result of lack of health services where they live.[41,42] In that respect, residential mobility is a predisposing characteristic variable. There are three Predisposing Characteristics variable groups: Demographic characteristics, Social structure and Beliefs.

These characteristics directly affect the Enabling resources which in turn affect Need and subsequently Health Behaviour and Outcomes and vice-versa. Enabling resources which may include income, health insurance, the availability and the number and range of health facilities and professionals, etc. are the means available to individuals to enable them to use health services. Even though individuals may be predisposed to using health services, enabling resources must be in place to facilitate use. Enabling Resources are therefore a key catalyst of health services utilization. A contentious issue here is the emphasis that Andersen places on Enabling Resources. They rank high on Andersen's degree of mutability, which is the ability of a variable to be mutable or changeable to impact on access. This key characteristic of the Andersen model helps understand that it is not enough for governments and healthcare services to be offered. They must be actively and proactively made available to the targeted public or communities in question, often through a process involving them to identify hurdles towards access. Minority communities have referred to this as the "active offer" (*offre active*) principle which is an important determinant of access to and use of (health) services.[215,216] The Enabling Resources of the model rank high on the mutability scale because they can be easily improved in

the short-term. The issue arising here is whether focusing on short-term goals as a result of political contingencies is a good strategy to improve access.

There has been a lot of focus on the importance of Need and its potential to determine the extent to which an individual may seek care. It is Need, whether perceived or evaluated, Andersen argues, that triggers the care seeking response or use of health services by the individual.[40] It is a particular health issue, or need, that usually triggers the use of health services and as such, Need characteristics in the Andersen Model, are the best predictors of health services use.[43]

2.3.3. Health Behaviour

The Health Behaviour Component of the model includes Personal Health Practices and Use of Health Services. Initially the outcome in previous models, health services utilization in the current model works with personal health practices to directly determine the outcomes which are Perceived Health Status, Evaluated Health Status, and Consumer Satisfaction. The improvement of the model recognizes that it is not enough to have access to health services. The question is, does access make a difference in the way the individual perceives his/her health status? Does it improve the evaluated or self-appraised health status? Has the experience of the individual been satisfactory? This improvement of the model also recognizes that personal health practices and use of health services are determinants of health. An individual's personal health practices may lead to positive or adverse health outcomes. Examples of personal health practices may include poor nutrition, smoking, drug consumption, alcohol abuse, healthy eating, and physical activity, to name only a few.[44] Similarly, a person's ability to access and use health services as seen in the Population Health approach has an impact on his/her health status. For

example, early and repeated mammography has been linked to prevention of breast cancer.[45] Hence, health behaviour is a good determinant of health outcomes. However, in both the Andersen Model and the Population Health framework, it is clear that health behaviour is affected and shaped by a number of other factors including the environment, the health care system, and population characteristics.

2.3.4. Outcomes

The Andersen Model recognizes that health services are meant to maintain and improve the health status of the population both in terms of perception by the population and evaluation by health professionals. Therefore, the outcomes of the Andersen Model are: Perceived Health Status, Evaluated Health Status, and Consumer Satisfaction. Both the subjective (Perceived Health Status) and objective (Evaluated Health Status) aspects of health status are needed, since health status cannot be limited to any one of the two dimensions. However, the choice of perceived or self-rated health status as the outcome variable in this study is guided by an overwhelming body of research that shows that perceived health status is an effective and accurate way of assessing health.[46,47,48] In addition, consumer satisfaction acts as an evaluative tool which helps shape future improvements of health services and point to health policy priorities. Along with Perceived and Evaluated health status, consumer satisfaction predicts subsequent use of health services.

2.3.5. Suitability of the model

The Andersen Model is appropriate for this research as a means for understanding, describing and analyzing the variables at the Environmental level, Population Characteristics

level, and Health Behaviour level to see their impact on the outcome of Self-rated health. Understanding how Canadian Francophone older adults perceive their health and the link this might have with their experiences of access and use of health services and possibly with their evaluated health status might shed some light on the importance of language and culture as enabling resources that facilitate health behaviour and impact on self-rated health.

However, some of the limitations of the Andersen Model include: its overly behavioural focus, its inability to account for the broader more structural determinants of health, and its bias towards a market-driven approach due to the lack of universal healthcare in the American context. A combination of the Andersen Model with Population Health was needed at the initial stages of the conception of this research. The Andersen Model became the more practical model that helped with variable consideration, selection, and analysis, and with understanding of health services use. Population Health for its part, provided a more robust approach of conceptualization of a range of factors well beyond the behavioural and into the broader determinants of health and not just health services use, necessary to better ascertain the case of OLM older adults as seen below.

2.4. The Population Health Perspective

2.4.1. Definition

Since the 1990s, research has shown that health is dependent upon an array of factors that are not limited to medical approaches and interventions.[49] The factors that contribute to health include physical, genetic, social, economic, political, environmental factors, and access to health services, among others. Evans, Barer and Marmor in 1994, laid out the groundwork for understanding and even defining Population Health in "Why Some People are Healthy and

Others Not".[50,51] Their seminal work shifted the focus from the individual and the health care system to the population or sub-groups therein, a broader definition of health, and an emphasis on health determinants and the interactions between them.[52] Since then, various definitions of Population Health have been proposed.

There is evidence of increasing focus in Population Health on theory conceptualization for use in conducting research.[53] However, Population Health is primarily concerned with the interplay between factors and structures that systemically enhance or impede health. As such, Population Health "focuses on the entire range of individual and collective factors and conditions, and the interaction among them that determine the health and well-being of Canadians".[54] As seen in Figure 2.4 below, it is an approach to health that seeks to "maintain and improve the health of the entire population and to reduce inequities in health status among population groups".[55] It advocates intervening on a broad range of health determinants to achieve its goal.

Population Health has been credited with shifting the definition of health from a purely clinical observation of absence of disease to a dynamic understanding that integrates social, economic, physical and environmental factors as all contributing to health. Hence, health is not a state, but a capacity or a resource that helps the individual reach his/her potential, develop, acquire skills and education.[50] Population health therefore "refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services".[51]

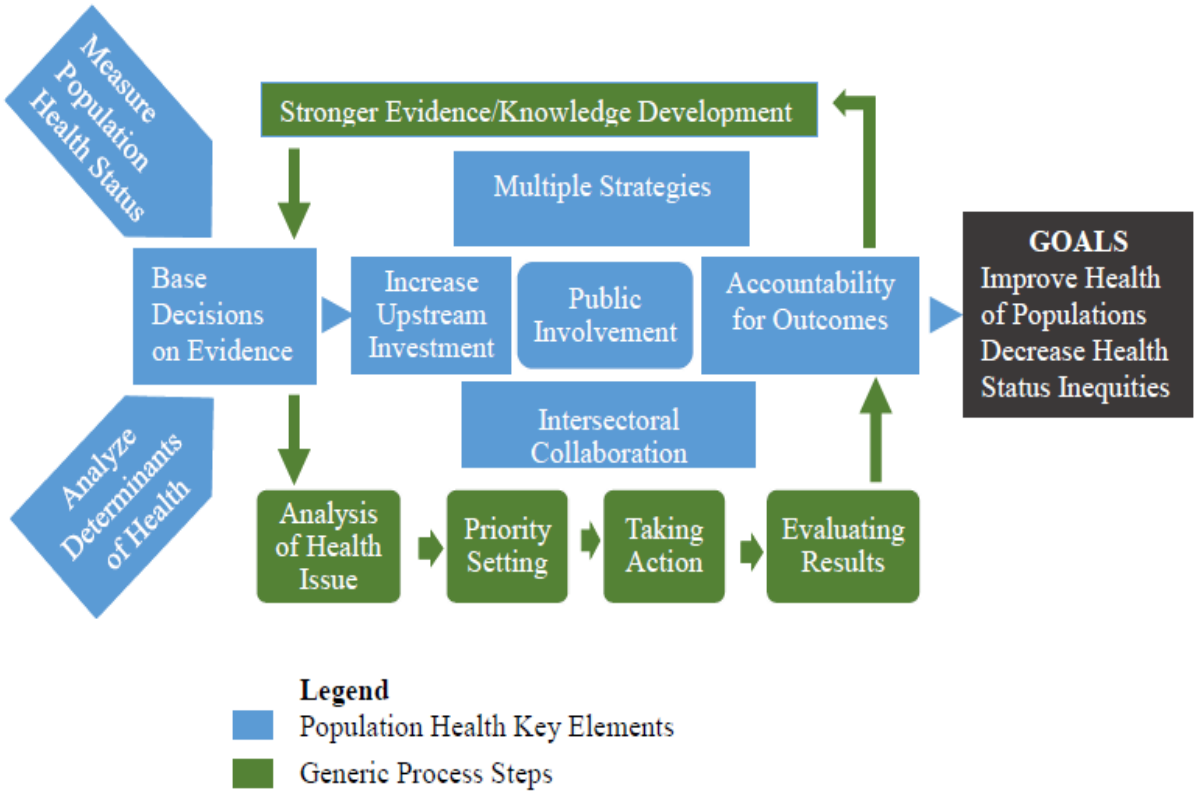
2.4.2. Appropriateness of a Population Health Approach

A Population Health approach is appropriate for this research since it focuses on older adults who are an important and vulnerable group within the population. Because this research looks at health disparities and how these adversely affect the health of Canadian Francophone older adults, a Population Health approach is warranted since it draws attention to all the interrelated factors that might play a role in the appraisal of health status. This, as a result, might shed some light on some of the major contributors of ill-health and the relative importance of language and culture, two determinants that are not always well-understood. Moreover, identifying the variables that influence self-rated health contributes to our knowledge of the key determinants that affect how older adults rate their health. Identification of these determinants favours a more fruitful multiple approach strategy that employs collaboration across sectors and levels. As such, involvement of the minority Francophone community is warranted in order to improve their health and reduce potential health disparities negatively affecting minority Francophone older adults.

2.4.3. Key Elements

Figure 2.4: Population Health Framework[56]

(Adapted from Population Health Agency of Canada)



The Population Health Framework of the *Population Health Agency of Canada* consists of the following eight key elements as represented in Figure 2.4 above: (1) Focus on the health of populations, (2) Address the determinants of health and their interactions, (3) Base decisions on evidence, (4) Increase upstream investments, (5) Apply multiple strategies, (6) Collaborate across sectors and levels, (7) Employ mechanisms for public involvement, and (8) Demonstrate accountability for health outcomes.

2.4.3.1. Focus on the Health of Populations

Population Health focuses not on individuals, but on the whole population or important groups within the population on the basis of age (e.g. older adults, children, or youth), gender (women, men), geography (e.g. remote, rural, urban), culture (e.g. Aboriginal, immigrants), and language (e.g. Francophones, Anglophones, Allophones), minority status (e.g. Canadian Francophones, immigrants) among many factors. Although the entire population or sub-groups therein is the unit of analysis, actions for health improvement take place at multiple levels including the national, provincial, regional, community, family, and individual level. Here, consideration of health status and health inequities helps identify and address health issues and health disparities.

2.4.3.2. Addressing the Determinants of Health and their Interactions

Unlike WHO's Conceptual Framework for Action on the Social Determinant of Health that focuses on the determinants of health inequities as further highlighted below, a Population Health approach measures and examines the full range of factors that influence or contribute to health. These determinants include: income and social position, socioeconomic status, social support networks, education, employment/working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biologic and genetic endowment, health services, gender, and culture. These determinants often interact with one another to influence health status. Linking health issues to their respective determinants and clarifying the mechanisms by which these determinants combine to cause health or illness is a key endeavour of Population Health research. The focus of this research on the determinants of self-rated health clearly falls within the Population Health framework. If the determinants of self-

rated health can be identified and the dynamics by which they affect self-rated health understood or identified, then steps can be taken at multiple levels including the policy level, to improve the health of Canadian Francophone older adults outside Quebec.

2.4.3.3. Base Decision on Evidence

Founding research and practice on evidence has become paramount in advancing knowledge and improving practice. A Population Health approach is an evidence-based approach that generates research whose results in the areas of health status, determinants of health and evaluation of the effectiveness of interventions, are used to improve health. It links appropriate or best available evidence to appropriate actions or decisions. This research seeks to contribute to the building of the body of evidence that is needed to address the health disparities negatively affecting minority Francophone older adults.

2.4.3.4. Increase Upstream Investment

Population Health focuses on the determinants of health – not just social, but institutional and structural – and on the policy environment factors among others, which are the root causes of health or ill-health.[57,58] As such, it invests its resources in these root causes for a maximum benefit for the entire population and the healthcare system. Research evidence guides the upstream investment since it identifies for each health issue the most contributing determinants and the best strategies to maximize impact. The further upstream the investment, the greater the gain for the population. Here, the Andersen model and the population Health approach are complementary in that the concept of mutability in the Andersen model ensures that action is taken where it is most likely to have the greatest impact, to lead to a positive change, a positive

modification in health status. An upstream investment needs to be targeted at those highly "mutable" (changeable or modifiable) factors in order to generate the best health outcome.

2.4.3.5. Apply Multiple Strategies

A Population Health approach is applicable across the range of interventions on the health continuum from primary prevention and health promotion, to health care services or delivery, to factors influencing health determinants. Strategies often target multiple settings such as homes, schools, workplaces, hospitals, communities, etc. Minority Francophone Canadians do not live in homogeneous communities. Their settings and contexts vary tremendously all across Canada. Those living in urban settings are not affected in the same way by language or access to health services issues as are those in rural communities. In addition, provinces vary in their health policies and programs and in their commitment to Canada's official languages. Hence, addressing the issue of access to health services is more complex than just hiring health professionals who speak French. It requires an approach that reflects the issues and challenges identified at various levels. For example, a strategy to reduce health inequities negatively affecting minority Francophone older adults may require action at the health education and health promotion levels, as well as more effective policies on the part of provincial governments.

2.4.3.6. Collaborate Across Sectors and Levels

The sixth element of this approach has, as a guiding principle, the interaction between the various determinants. For example, a determinant such as socio-economic status covers a range of sectors including education, occupation, and income. As such, it is important for the health sector to work with organizations in the educational, social services, and economic sectors to

have the maximum effect. This collaboration and partnership brings together resources and expertise from various sectors for the benefit of the population.

2.4.3.7. Employ Mechanisms for Public Involvement

A Population Health approach ensures that opportunities are offered to the public for their involvement in the development of health priorities and strategies for health improvement. Public involvement means participation of both the majority and minority populations. Involvement of both segments of the population builds trust, increases the likelihood of success of program implementation, and increases the level of acceptance, adherence to, and ownership of decisions and policies. The work by the grassroots organization called Société Santé en Français (SSF) across Canada is an example of effective participation of Francophone minorities in working on health priorities that are relevant to them.

2.4.3.8. Demonstrate Accountability for Health Outcomes

A Population Health approach focuses on health outcomes. Hence, commitment to measuring the degree of change attributable to interventions is paramount. As such, careful planning, clear identification of goals, and evaluation of both short-term and long-term outcomes are essential. Since population health is the target, it is important that the results are made readily available to the public, to the various stakeholders, and to policy and decision makers. This is why the findings of this research were presented to the Francophone community for their feedback, as a first step in consulting with a key group of stakeholders. That feedback in addition to the findings, help make the case for improving policies regarding access to health services for Francophone minority communities.

2.4.4. Population Health within this research's Overarching Framework

The Population Health approach used in this research contributed significantly to the understanding of factors affecting the self-rated health of OLM older adults. It provided the conceptual lens needed to move beyond Andersen's behavioural model and examine the factors at much broader levels that affect health. However, this earlier population health approach was limited in its scope and unable to truly address the structural determinants at the root of health inequities. The 2007 World Health organization's CSDH Framework for Action was conceived to better capture the inherent inequities due to systematic political and structural barriers that plague many countries. This definite emphasis on policies, social structures and class, culture and built environment that are seen as divisive and inequitable was considered an added value to this work.

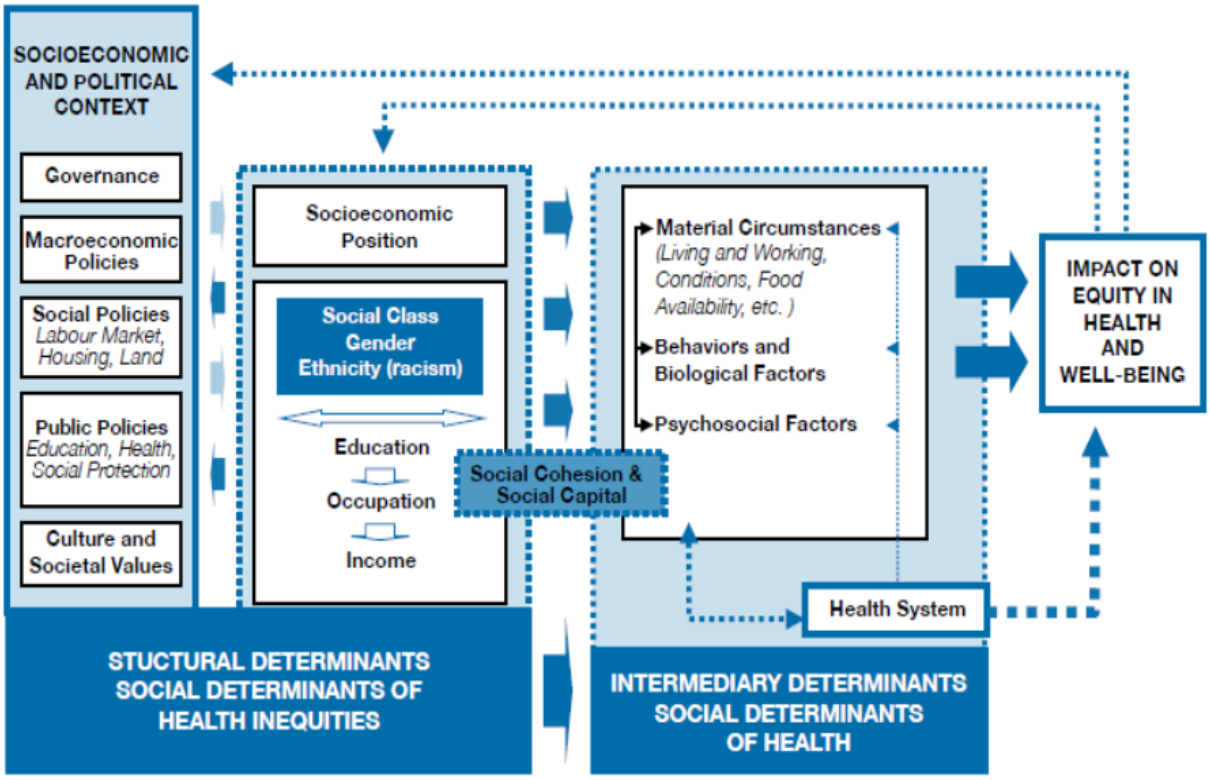
2.5. WHO Conceptual framework for action on the Social Determinants of Health

The WHO's Conceptual framework for action on the Social Determinants of Health as seen in Figure 2.5 below, is an action oriented framework which, for the final part of this research, helped translate research knowledge into action. Unlike the Population Health framework and the Andersen Model for health services utilization that were more descriptive in that they helped define, understand, select and analyze the variables, the CSDH Framework for Action helps identify key aspects where action is needed in order to address prevalent health inequities between minority Francophone older adults and their counterparts in the general population.

The CSDH Framework for Action's greatest contribution is its ability to separate the social determinants of health inequities (structural determinants) from the social determinants of health (intermediary determinants). The former affects the latter which in turn has an impact on equity in health and well-being. Action on the determinants of health means working to improve health for the entire population while action on the determinants of health inequalities presumes looking at the social and political processes that lead to "stratification and social class divisions in society and that define individual socioeconomic position within hierarchies of power, prestige and access to resources". This framework is helpful for research among minority Francophones in grounding policy action on the social determinants of health and in identifying places where policy interventions are needed to address the potential causes of health inequities.[59] Conceptually, this can be thought of as providing a feedback loop from Outcomes back to Health Care Services in the Andersen model.

The structural determinants aspect of the framework shows that the socioeconomic and political context which includes governance, policies, and culture and societal values, has an impact on socioeconomic position, social class, gender, ethnicity ("race"), education, occupation, and income, and vice versa. The intermediary determinants include the health system, psychosocial factors, behaviours and biological factors, and material circumstances such as living and working conditions, and food availability. Straddling both the structural and the intermediary determinants are social cohesion and social capital.

Figure 2.5: WHO's CSDH Framework for Action (source: WHO)[59]



The CSDH Framework for Action principally helped look at the structural determinants of health inequities affecting OLM older adults, especially the role of policies and the policy environment in equity in health. Unfortunately, the CSDH Framework for Action could not provide the conceptual and analytical lens needed to examine policies, evaluate them, and work towards more equity in health. To that end, Rossell's Framework of Criteria for Evaluating Public Policies as presented below, was used.

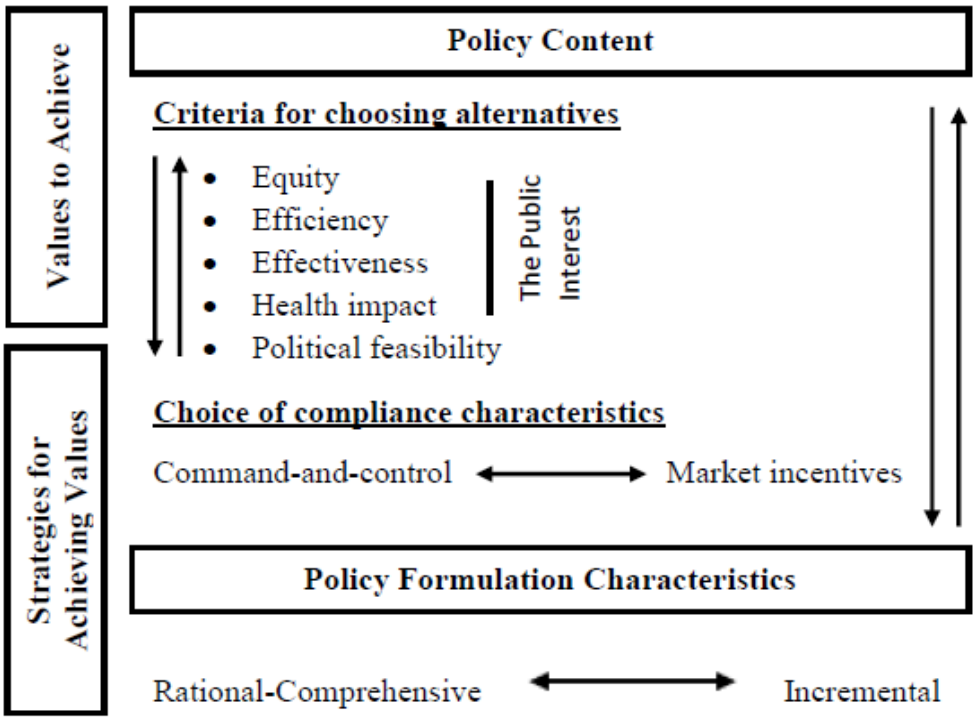
2.6. Rossell's framework of Criteria for Evaluating Public Policies

As is the case with the CSDH Framework for Action, Rossell's framework in Figure 2.6 below, served as the conceptual lens for the final part of this research to evaluate policies. Rossell's framework has two main characteristics: the Policy Content and Policy Formulation

Characteristics. Policy Content mainly includes the Criteria for Choosing Alternatives and the Choice of Compliance Characteristics. The Choice of Compliance Characteristics helps examine whether policies are achieved through a hands-off incentives approach or through direct control. The Criteria for Choosing Alternatives include: equity, efficiency, effectiveness, and political feasibility. Policy Formulation Characteristics describes whether a step by step incremental approach or a comprehensive one is used. The linguistic policies of the provinces of Saskatchewan, Manitoba, Ontario, and New Brunswick, especially the French-language services policies, were assessed using Rossell's framework criteria above. A new aspect, namely the ability of government's French-language services policies to positively impact health was added to the others in order to fulfill the research objectives.[60] This additional criterion was based on the following classification of French language services policies: broad-based language policies, sector-based language policies, and policies of non-intervention.[61]

Figure 2.6: Rossell's Framework of Criteria for Evaluating Public Policies [60]

(Adapted from Rossell)



Rossell's Framework of Criteria for Evaluating Public Policies is the last model in the Overarching Framework guiding this research. It clearly contributes to move from knowledge generation to action, from conceptualization of the determinants of self-rated health among OLM older adults to a practical appraisal of the structural factors such as policies and policy regimes and the role these play in enhancing or reducing social disparities and health inequities. Through Rossell's policy evaluation criteria, the impact and the role of policies and policy regimes on OLM older adults can be assessed and ascertained.

3. Brief Literature Review and Overview of Methods

3.1. Definition of Francophones

Defining Francophones is a point of contention in the literature. Researchers do not agree on one definition and this has serious consequences on data comparability. For example, in their study conducted for the joint commission on healthcare research for Francophones in minority situations, Eric Forgues and Rodrigue Landry define and describe Francophones in nine various ways. Francophones can be understood as (1) people whose mother tongue is French, (2) people with knowledge of French, (3) people who speak French at home, (4) people for whom French is the First official language spoken. It can also be a combination of any two or more of the previous definitions such as (5) French mother tongue and knowledge of French, (6) mother tongue and language spoken at home, (7) Knowledge of French and/or English and French mother tongue, (8) French mother tongue and first official language spoken French or French and English, (9) and mother tongue and knowledge of French.[62] The definition of Anglophones follows the same guidelines.

Although these various definitions are found in the literature, the description of Francophones as people whose mother tongue is French is the most widely used. However, all researchers do not agree on the operational definition of the term "mother tongue". At issue with this term is that, depending on the operational definition, it can be limiting and affect both sample size and comparability with other research. To solve this problem, a combination of definitions is often used.

Statistics Canada defined Francophones in the SVOLM using the following three criteria: (1) those having French as their mother tongue, alone or with another language; (2) those whose mother tongue is a language other than French and English but who, of the two official languages

know only French; (3) those whose mother tongue is neither French nor English, and who may speak French most often at home.[63] Some authors do not agree with this definition which they find too generous as it encompasses Canadians of French ancestry who may not themselves speak French.[64] Moreover, all these definitions focus on behavior without any context or any reference to identity or to institutional completeness which affect behaviour.

Despite all the difficulties surrounding the description and definition of Francophones in the literature, the consensus seems to be that Francophones outside of Quebec are described and known as people whose mother tongue is French and/or who may know, understand and/or speak French most often. However, this research uses the definition of Statistics Canada of French as mother tongue, as first official language spoken, or as language spoken at home, as presented above, in addition to an algorithm by Bouchard et al.[65]

3.2.Demographics

The Definition of who is Francophone has a direct impact on the demographics of Francophones in Canada. Various estimates of the Francophone population exist in the literature, particularly for those in a minority situation. This is also true for Anglophones living in Quebec. The following figures are those generally agreed upon in the literature and in government statistics.

According to the 2006 census, there are over one million people in Canada outside of Quebec who self-report themselves as speaking French as their first language.[62] This represents over 3% of the general population. In addition, the Anglophone minority in Quebec represents about 2% of the Canadian population. This means that the two linguistic minorities combined

are about 5% of the total population in Canada, which represents a significant portion of the population.

There are currently over 4.3 million older adults aged 65 and over in Canada. They represent over 13% of the general population.[66] This number, which is significant, could double in the next twenty years with the influx of "Baby Boomers" in this age group. In Saskatchewan which is the province with the highest proportion of elderly, older adults (aged 65 and over) represented in 2006 about 15% of the population.[67] In the same year, the national average was 13.1%. The proportion of older adults was 13.5% in Manitoba in 2006, 13.8% in British Columbia, and 10.5% in Alberta in the same time period.[68]

With regards to minority Francophones in Western Canada, there were in 2006 between 16,055 and 16,890 people with French as either their mother tongue or first language in Saskatchewan, representing 1.7% of the population of the province.[69,70] The Fransaskois, a population of 16,055, are scattered throughout the province but form important communities in the major cities of Saskatoon (3,490), Regina (2,675), and Prince Albert (1,285). In Manitoba, the Francophone population is larger with 43,960 Franco-Manitobans, about two-thirds of whom (29,025) reside in Winnipeg. Alberta has the largest number of Canadian Francophones in the Prairie Provinces at 61,225, with the majority living in Edmonton (21,975), Calgary (16,310), Grande Prairie (1,815), Wood Buffalo (1,515), and Red Deer (1,260). In British Columbia, the Francophone population of 54,740, is most highly concentrated in the Vancouver Census Metropolitan Area (CMA) (24,130 (44%).[71]

The Ontario Francophone population of 488,815, which is almost half of the minority Francophone population in Canada, is concentrated in the major CMAs of Toronto (58,590), Ottawa (139,205), Sudbury (42,950), Timmins (16,405), Cornwall (13,740), St. Catharines -

Niagara (13,490), Windsor (11,100), and North Bay (10,245).[72] As can be seen, 50% of the Francophone population of Ontario reside in the census metropolitan areas of Toronto, Ottawa, and Sudbury.

In the Maritimes, New Brunswick has a Francophone population of 232,980 according to the 2006 census. Regionally, this represents 85% of the Maritimes Francophone population and internally; provincially, it represents 32.4% of New Brunswick's population which is 745,700 in that census. This strong minority status may have implications with regards to access and use of health services that are not the same as in the rest of the region and other parts of the country such as the Prairies where the Francophone population is scattered over larger geographic areas. However, within New Brunswick, there are areas of concentration of the Francophone populations such as in the cities of Moncton (42,920), Bathurst (20,800), Edmunston (19,790), and Campbellton (8,865).[73] In the rest of the Maritimes, there are 32,540 Francophones in Nova Scotia with 10,080 in Halifax, 5,345 on Prince Edward Island; and 1,885 in Newfoundland and Labrador.

The Territories have a total Francophone population of 2,445 with 1,105 in the Yukon, 970 in the Northwest Territories, and 370 in Nunavut. The Francophone population represents 2.3% of the total population of the territories evaluated at 106,300[74]. Although this percentage is similar to that of the Prairies, one can reasonably assume that their realities with regards to access to and use of health services are different given the low population base, and lower population density.

A closer look at Francophones in Western Canada shows that their total number according to the 2006 census is about 175,980. This represents 1.9% of its population. The percentage is somewhat higher in the Prairie Provinces at 2.3% for a Prairie Francophone

population of 121,240. This low population size and proportion has implications in terms of access to services in French.

Of all the Francophone minorities across the country, those from Saskatchewan and Alberta compared very poorly, as they ranked last when it came to the difficulty the Fransaskois and Franco-Albertans had in accessing health services and health professionals in their own language.[63] Although Manitoba ranked better, probably due to the concentration of about two-thirds of its Francophone population in the Winnipeg CMA, the level of access was still not adequate. This underscores the challenges that minority Francophones face in Canada where French communities outside major cities are getting smaller and the need for the French language and French education, and Francophone services such as access and use of health services are increasingly difficult to address.

Demographic reality also has legal ramifications in many respects. Bourgeois et al, note that the 1967 Royal Commission on Bilingualism and Biculturalism recommended that all provinces adopt an official languages act to ensure provision of health services in French "within their jurisdiction, while to degrees that will in practice vary depending on demographic conditions".[75] According to these authors, language legislations across Canada vary in their content and strength depending on their constitutional and legislative regimes, as will be discussed shortly. It is stronger where the minority Francophone population has a stronger demographic base as is the case within the provinces of Quebec, New Brunswick and Ontario as opposed to the remaining provinces. With the decline of minority Francophone communities across Canada and under the auspices of the federal government, provincial governments as well as Francophone communities are resorting increasingly to immigration to boost the Francophone population.[8,76] This influx of Francophone immigrants is contributing to a shift in demographics

that is contributing to the vitality of Official Language Minorities and may impact on the need for and access to health services.[77]

3.3. Health Status

The literature is virtually unanimous that older adults do not enjoy the same level of health as the general population.[25] This is a growing trend which is due to the fact that people are living longer; also, an aging population corresponds to a declining birth rate.[78] A Manitoba study found that the number of older adults in the province increased significantly between the early 1970s and 1980s and that the health status of older adults declined with increasing age as more health issues were reported.[25] The decline in the quality of health status is associated with increased and repeated use of health services. A study in Quebec showed that health services use by older adults aged 65 and over accounted for over 47% of total health care cost increase.[79] This is mainly due to the increasing health issues such as chronic and acute illnesses, injuries, and mental and psychological issues. These have been found to contribute to the elderly functional decline which limit their autonomy and gradually lead to impairment, disability and handicap.[80]

Francophone in a minority situation have an even poorer health status. More and more reports are showing that minority Francophones have a poorer access to and use of health services than the rest of the population.[81] Similarly, the Anglophone minority population in Quebec has been noted to have access and utilization issues with regards to health services.[82] This lack of access to health services among OLMCs contributes to poor health status, an outcome which can be reasonably assumed to be even more pronounced among older adults within Francophone minority communities.

Language barriers have also been shown to increase consultation time, the number of diagnostic tests and the probability of diagnostic and treatment errors; it can affect the quality of services, reduce the probability of treatment compliance and increase frustration and dissatisfaction with the healthcare system.[83] Language barriers may lead to disparities in treatment of linguistic minorities as opposed to the general population.[84] Studies in the U.S. have used various study designs to analyze the impact of language barriers on the healthcare system. Studies using interpreters have found that the quality of health services was improved and that there was a financial gain to the healthcare system, especially for patients without health insurance, due to lower cost to follow up.[85]

It is not therefore surprising that language barriers have been found to be one of the most important determinants of health disparities between linguistic minorities and the general population.[86] As a result, it is reasonable to expect that the disparities affecting the elderly from minority communities would be greater since they are in more need of access and use of health services due to increased health needs. As a matter of fact, research shows that within linguistic minority groups, older adults tend to be less likely to communicate in the majority language than the rest of the minority group. For example, a study in the South Asian community in the United States found that the elderly was the group with the poorest English skills.[87] As a result, communication with health professionals was seriously affected. Another study on elderly language skills in England found that older adults had poor English proficiency skills and this negatively affected their health and social status.[88] This demonstrates that older adults within their linguistic minority groups are more disadvantaged regarding access to and receiving health services than the rest of the minority population. This leads us to postulate that linguistic minority older adults are more vulnerable than the general Canadian population of older adults.

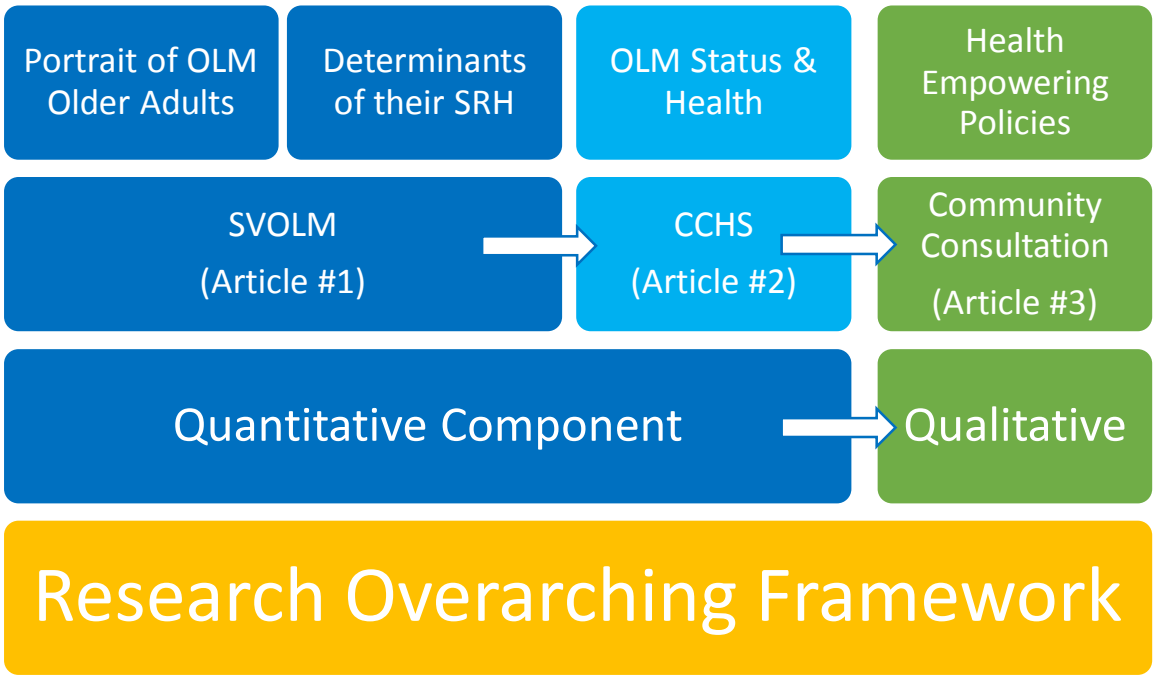
In this regards, not much is known in Canada with regards to the access and use of health services by minority Francophone older adults; consequently, this study contributes to filling the current knowledge gap.

3.4. Overview of Methods and Analyses

As shown in Figure 3.1 below, this research has two main components: one is quantitative and the other, qualitative. The quantitative part which concerns the first two articles, is a cross-sectional design that uses two surveys from Statistics Canada: the 2006 post-census survey called the SVOLM conducted by Statistics Canada which interviewed minority Francophones and Anglophones across the country and the 2007 CCHS cycle 4.1 which is a survey in the same 12-month period covering all Canadians. The CCHS was used to complement the SVOLM by allowing comparison with the general population.

The total sample size used in the SVOLM was 8,049 Official Language Minority older adults aged 50 years and plus including 4,888 minority Francophones and 3,161 minority Anglophones in Quebec. For the CCHS, the total sample size was 24,803 Canadians aged at least 50 years. This general population sample included 1,363 members of Official Language Minority Communities. It should be noted that in both surveys, the maximum age was 80, and the populations of all three Canadian territories namely, the Northwest Territories, Yukon, and Nunavut were excluded due to very low sample sizes. The qualitative/evaluative component in the third article is based on knowledge translation activities such as an oral presentation of findings to community stakeholders for their feedback. This feedback was incorporated in a position paper dealing with policy analysis and evaluation starting with the Saskatchewan French Language Services Policy and including policies from Manitoba, Ontario, and New Brunswick.

Figure 3.1: Research Overview



Quantitative analyses were carried out using descriptive univariate and bivariate analyses, as well as multivariable analyses through multiple linear regression modelling using SPSS 19 & SUDAAN as further described in chapters five and six. All the assumptions of multiple linear regression such as linearity, independence of errors, equality of variances (homoscedasticity) & normality were all verified. Bootstrapping was conducted for accurate standard error estimation. Binary variables were coded with categories 0 and 1. 0 as the reference category was generally applied to categories with the highest number of cases. The outcome variable of SRH had five categories coded as: 1-Excellent, 2-Very Good, 3-Good, 4-Fair, 5-Poor. A manual backward selection approach done through for model building and variables were eliminated on the basis of non-significance (P>0.05) and of variable importance.

The findings of the quantitative analyses were then presented to the Fancophone community with follow-up discussions for their feedback and insights at three conferences and one workshop. Qualitative analyses were done by reviewing feedback and discussion notes from presentations to community stakeholders to highlight key themes and concerns in light of existing policies. Key themes were regrouped and analyzed, and an evaluation of provincial/territorial French-language health services policies/legislation was conducted with in-depth focus on the Saskatchewan Government French-language services policy. This policy evaluation was done using the following criteria of an adapted version of Rossell's Framework of Criteria for Evaluating Public Policies: Equity, Efficiency, Effectiveness, Health Impact, Political feasibility, as well as whether the policies reflected a hands-on/hands-off policy approach.

From data analyses to presentation of findings to minority Francophone community stakeholders, this research's mixed methods approach used both quantitative analyses and a qualitative methodology to tease out and better examine the host of factors and particularities pertaining to the health of OLM older adults in Canada.

4. Article I: Determinants of Self-rated Health of Francophone Seniors in Minority Situation in Canada

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4.1. Introduction: Minority Francophone Seniors: A Vulnerable Population

Canada's population is aging rapidly as more and more people live longer than previous generations. Life expectancy in Canada increased from 60 years in 1922 to 74.9 years in 1979 to 80.4 years in 2005.[89,90] It is anticipated that in 2026, one in five Canadians will be 65 years and over, compared to one in eight Canadians in 2001.[91] This growing trend has significant ramifications in terms of the health care expectations and demands, as well as of the overall burden on the healthcare system. Seniors have more need for health services than the general population because of age-related health issues.[24,25,26] For example, among those 65 and over, physical falls account for over 85% of injury hospitalization, which is significantly higher than in the general population.[92]

Most Canadians assume that health care is equally accessible to everyone as a direct result of Canada's universal Medicare system. Recent research in Canada and in Europe indicates however that access to health care varies greatly due to structural and contextual inequalities such as socioeconomic, geographic and cultural factors.[93,94,95] For example, among the general Canadian population, it has been shown that people in the lowest socioeconomic group are five times more likely to suffer from a chronic condition and this may be attributed to added stressful life conditions, geographic disparities, and systematic lack of investment in social capital.[96]

In addition, compelling evidence demonstrates that language barriers have an adverse effect on access to health services and on quality care.[97,98,99] For example, a study on mortality trends in Canada from 1971 to 1996 showed that older, non-English speaking, less educated women were less likely to use cervical cancer screening programs and therefore were at higher risk of morbidity and mortality.[100] In a qualitative study conducted in Ontario, linguistic and cultural barriers were reported by Francophone women while dealing with their breast cancer diagnostic and treatment.[101] A low number of French speaking health professionals and the difficulty to identify them were also found to impede the availability of services in French. This situation was worse in rural settings due to healthcare workers' tendency to cluster in urban centres.[102]

Scattered across Canada in a predominantly Anglophone environment, minority Francophone seniors face important challenges with regards to access to and use of health services in their own language.[65] Early evidence from studies in the Canadian context suggests that French-speaking minorities may be in poorer health condition than the English-speaking majority population.[103] According to Bowen, minority linguistic groups such as Francophone seniors outside Quebec are at increased risk of ill-health due to their lower access to health

services in their own language, diagnostic errors and poor patient-provider communication.[104] When these language barriers are accompanied by challenges due to age, this may have an even greater impact on health. The research reported here sought to explore this question further and used data collected by Statistics Canada in the 2006 post-census survey on the Vitality of Official Language Minorities (SVOLM). The overall purpose was to explore factors associated with self-rated health in Francophone seniors.

4.2. Objectives

The objectives of the study were threefold: 1) to assess the determinants of self-rated health of minority Francophone seniors; 2) to compare them with those associated with self-rated health in minority Anglophone seniors in Quebec; and 3) to determine what significantly affects self-rated health among younger Francophone seniors compared to older seniors of the same language group.

4.3. Data Source and Methods

4.3.1. The Survey on the Vitality of Official-Language Minorities (SVOLM)

The study used data from the Survey on the Vitality of Official-Language Minorities which was carried out by Statistics Canada following the May 2006 census and covered the 10 Canadian provinces and three territories. The adult portion of the survey targeted persons aged 18 years and over who belonged to official-language minorities. Every fifth respondent household on the list of members of Official Language Minorities received a letter of introduction about the survey inviting them to respond to a telephone interview of approximately 40 minutes. A computer assisted direct entry method by interviewers as the interview unfolded over the

telephone ensured more data accuracy and minimized reporting errors and biases. It yielded a response rate of 63% for 19,345 adults who completed the questionnaire. Of this sample, 12,376 were Francophone respondents in all Canadian provinces and territories except Quebec while 6,969 were Anglophone respondents in Quebec. Among the 36 modules of the survey questionnaire the health module consisted of questions on self-rated health, importance of being served in one's own language, and access to and utilization of health services in the minority language such as physicians, nurses, telephone health lines, and hospital/clinics/health centres.

4.3.2. Guiding Framework and Selection of Variables

The Behavioural Model of Health Services Use, which was adapted for this study as seen in Figure 4.1 below, was initially developed by Andersen to better circumscribe factors that might impact perceived and objective health status as well as consumer satisfaction. Such factors were grouped into three categories: the external environment, the population characteristics and health behaviours including personal health practices and use of health services.[32]

Within the health module of the SVOLM, the question: "In general would you say your health is: excellent, very good, good, fair, poor?", otherwise called "self-rated health", was answered by all respondents. According to the literature, this single question has been shown to be a valid and robust measure of subjective health.[105,106] Therefore self-rated health was chosen as the primary outcome variable.

The selection of explanatory or independent variables was guided by the Andersen model, the literature on self-rated health, the researchers' knowledge of Francophone seniors living in a minority context and the available information within the SVOLM modules. Variables pertaining to the external environment included the following: *concentration of minority language*

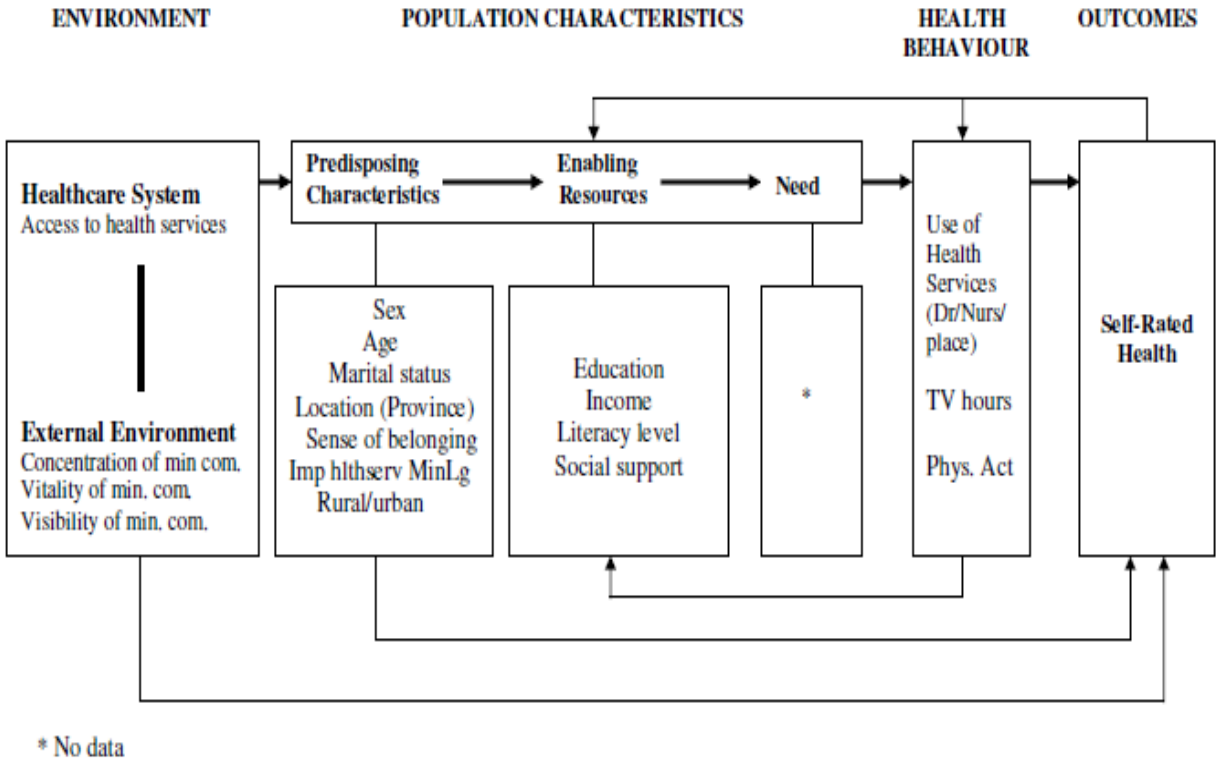
community, *vitality of minority language community*, and *visibility of minority language community*. The variable *concentration of minority language community* referred to the proportion of members of the minority language within their municipality of residence, *vitality of minority language community* referred to people's appraisal of the vitality of their minority language community. The variable *visibility of minority language community* was derived from four questions: the presence of the minority language community in businesses, in the media, in services provided by the federal government and in services provided by the provincial government. The categories for this new variable were: *weak visibility*, *intermediate visibility* and *strong visibility*, with *weak visibility* as the reference category. Visibility referred to the perception of the minority language in the media, community, and within government institution.

For the Population Characteristics, the Predisposing variables included the following information: *sex, age, marital status, residence (rural or urban), regions (location), sense of belonging to minority language community, importance attached to health services in the minority language*. Enabling Resources comprised the *education, income, literacy level, and social support* variables. The *social support* variable referred to likely people or services besides spouse to turn to in case of illness. The initial income variable was re-coded into a new variable called Low *Income Cut-off* (*LICO*) with categories of below and above $25,000. *LICO* is a poverty threshold developed by Statistics Canada with the established cut-off point at $23,300. In this study it was rounded to $25,000 because of the SVOLM income variable pre-set categories.[107,108] The Need component which often refers to particular health issues did not yield sufficient, relevant information from the survey due to missing cases or data. The Health Behaviour component of the model included the following variables: use of *doctor's services (less than three times, regularly, often), use of nurse services (yes/no), hours spent watching TV*

as an indicator of sedentary behaviour (with 14 hours per week as cut-off point), physical activity (defined as practicing sports sometimes, regularly, or often), and a combined variable called *use of health services (Place)* including hospital, clinic, telephone health line, defined as place of health services use other than the regular physician's office. With regards to the cut-off point of 14 hours for weekly TV, it is a threshold based on an average daily TV watching of two hours which research has consistently showed to have a negative impact on health.[109]

Figure 4.1: Variables from SVOLM fitted in the Andersen Model [40]

(Adapted from Andersen)



4.3.3. Sample Description

Out of 19,345 adults respondents, 60% were 50 and over with 4,888 Francophone seniors and 3,161 Anglophone seniors in Quebec. As per Statistics Canada criteria, a "Francophone" outside Quebec was defined as an adult whose mother tongue was French, or who spoke French at home, or who knew French as his/her first official language spoken, or was interviewed in French, and an "Anglophone" in Quebec was similarly defined.[63] As shown in Table 4.1 below, the Territories had to be excluded from the analysis because of a too small sample size. Data were collected in each province but for analysis purposes, they were grouped into broader regions except for Ontario. (See Table 4.2)

Table 4.1: Study sample with geographic breakdowns

Location	Provincial and/or Sub-provincial samples		Total Sample
Maritimes	Newfoundland & Labrador	189	1,845
	Prince Edward Island	256	
	Nova Scotia	298	
	New Brunswick (1,102)	North	
		South East	
		Rest	
Ontario	North East	386	1,754
	South East	411	
	Ottawa	385	
	Toronto	253	
	Rest	319	
Western Provinces	Manitoba	378	1,289
	Saskatchewan	302	
	Alberta	334	
	British Columbia	275	
Total	**All Provinces/regions except Quebec**		**4,888**
Quebec	All of Quebec		3,161
Territories	Yukon, Nunavut and the Northwest Territories		excluded

4.3.4. Statistical Analyses

4.3.4.1.Descriptive Analyses

Descriptive analyses including frequencies, cross tabulations, and bivariate linear regression analyses were carried out using SPSS 19. The outcome variable of self-rated health had five categories coded as follows: 1-Excellent, 2-Very Good, 3-Good, 4-Fair, 5-Poor. All potential variables to be considered for the model building phase of the multiple linear regression were coded appropriately either as binary variables with categories 0 and 1 or as a dummy variable for variables with more than two categories. The reference category coded as 0 was generally applied to categories with the highest number of cases.

A frequency analysis of all variables of interest led to the exclusion of variables with a high percentage of missing cases i.e. 10% and over. Some of them were nevertheless included in cross tabulation analyses to provide some context but could not be considered during the model building phase. Cross-tabulations were generated between some key independent variables and the outcome variable *self-rated health* which for this part of the analysis was combined as follows: (1) *poor and fair,* and(2) *good, very good, and excellent* (Table 4.2) for better interpretation of results. The outcome variable *self-rated health* was assumed to be continuous and as a result, a bivariate linear regression analysis was carried out in order to examine the association between each potential independent variable with the outcome variable *self-rated health*. Some variables were excluded from further consideration when no statistically significant association with self-rated health was found.

4.3.4.2. Multiple Linear Regression

4.3.4.2.1. Rationale and key Assumptions

Multiple linear regression was used for this study because of its robustness in multivariable analysis design, but also because unlike all other procedures that were examined, its key assumptions of linearity, independence of errors, equality of variances (homoscedasticity) and normality were all verified.[110,111] The normal P-P plot of regression standardized residual showed that expected and observed values yielded excellent linearity. With regards to the independence of errors, the Durban-Watson test statistic yielded a value of 1.925 (~ 2) very close to 2 which showed that there was no serial correlation of errors.[110,112] As for homoscedasticity, the plot of standardized residuals (ZRESID) with standardized predicted values (ZPRED) showed constant variance of the errors. Finally, a histogram of the standardized residual with a bell curve confirmed that the assumption of normality was met.

4.3.4.2.2. Statistical Procedures

A manual backward selection approach done through SPSS 19 was used as all potential explanatory variables were included in the model initially. Variables were eliminated on the basis of secondary importance as found in the literature and of non-significance (P>0.05). However, some key variables such as age, sex, urban/rural, income and education were kept in the model because they are shown in the literature to be influential and might also be confounding factors.

The standard errors and confidence intervals yielded by SPSS were not accounted for due to the complex survey design methodology. In order to have correct standard errors and confidence intervals bootstrapping was done through SUDAAN.[113]

4.4. Results

The descriptive output showed that within the sample of 4,888 francophone seniors, females represented 55.7% of the sample and people aged 50 to 64 years accounted for over 59% of the sample. In addition, over two third of seniors had a partner (69.9%).

4.4.1. Selected descriptive results

Table 4.2: Cross-tabulations of self-rated health and selected variables for Francophone seniors (Values in %)

Independent Variables of interest		Self-rated Health		P-Value
		Poor to fair	Good to excellent	
Importance of health services in minority language	Important	24.2	75.8	0.000
	Not Important	20.8	79.2	
Rural/Urban	Urban	22.8	77.2	0.000
	Rural	22.3	77.7	
Visibility of minority language community	Strong	22.7	77.3	0.000
	Weak	22.6	77.4	
Age	50-64 years	17.4	82.6	0.000
	65+ years	30.2	69.8	
Sex	Female	22.7	77.3	0.000
	Male	22.5	77.5	
Location	Maritimes	26.7	73.3	0.000
	Ontario	21.6	78.4	
	West	20.1	79.9	

Cross-tabulations showed that for the variable *importance of health services in the minority language*, those who felt that it was important to receive health services in French (minority language) rated their health significantly less favourably than those who thought it was not important. Those living in urban areas rated their health slightly less favourably than their rural counterparts and this difference was statistically significant. In addition, minority Francophones between 50 and 64 years rated their health significantly higher than those 65 years and over. Finally, seniors who stated that their community had a *strong Francophone visibility* rated their health slightly less favourably than those living in communities with *weak visibility*. Finally, Francophones in the West tend to rate their health better than those in Ontario and significantly better than those in the Maritimes.

4.4.2. Factors affecting self-rated health appraisal among Francophone seniors in minority situation

The results presented below follow the Anderson model's categories as described in the methods' section. Since the outcome variable *self-rated health* was coded (1-Excellent, 2-Very Good, 3-Good, 4-Fair, 5-Poor.), the signs of beta coefficients in the multiple linear regression output should be interpreted accordingly with the minus (-) sign indicating better self-rated health and the plus (+) sign indicating poorer self-rated health.

In the external environment component, *concentration* and *vitality of minority language community* were both significantly associated with self-rated health ($p<0.05$). More specifically, minority francophone seniors living in *high concentration areas* compared to those living in *weak to medium concentration areas* were more likely to report a poorer self-rated health.

However, *strong vitality of minority language community* as opposed to *weak vitality* was associated with better self-rated health.

In the predisposing characteristics component of the Andersen model, the following variables: *marital status, location,* and *sense of belonging* were found to be significantly associated with self-rated health ($p<0.05$). With regards to *marital status*, *having a partner* compared to *having no partner* was associated with a better self-rated health. Also, living in *western provinces* compared to *Ontario* was associated with a better self-rated health. The dummy variable *living in the Maritimes* was not significant. In addition, Francophone seniors who felt they *belonged to the francophone community* were more likely to rate their health higher than those who felt they *belonged to the Anglophone community*. However, belonging to both groups was not found to be statistically significant. In addition no significant differences were found between men and women and age groups.

In the enabling resources component of the Andersen model, *education, income, literacy level* and *social support* were all found to be statistically significantly associated with self-rated health. In terms of *literacy level*, *poor reading skills* compared to *good reading skills* was significantly associated with poorer self-rated health ($p<0.0000$). Similarly, having an *income below the Low Income Cut-off (LICO)* was found to be associated with poorer self-rated health. H*aving no social support* compared to *having support from family and friends* was associated as well with poorer self-rated health. However those who received *support from community resources and public institutions* tended to rate their health more poorly compared to those who received *support from family and friends*.

In the health behaviour component of the model, *watching TV for more than 14 hours a week, and physical activity,* were all statistically significantly associated with self-rated health. In

fact, *watching TV more than 14 hours a week* compared to *less than 14 hours a week* was associated with poorer self-rated health. Conversely, *often practicing sports* compared to *practicing sports regularly* was associated with better self-rated health. Similarly, *practicing sports sometimes* was also associated with better self-rated health. With regards to the use of health services, both variables use of *doctor services* and *use of nurse services* were significantly associated with self-rated health but unfortunately *language of service* preference could not be assessed due to a high number of missing cases. As seen in Table 4.3 below, *seeing the doctor less than three times in a year*, as opposed to *regularly* was associated with better self-rated health. However, *seeing the doctor often* (more than six times a year) compared to *seeing the doctor regularly* (four to six times a year) was associated with a poorer self-rated health. Similarly, *use of nurse services* compared to *no nurse service use at all* was associated with a poorer self-rated health. One would expect then that use of doctor and nurse services is related to greater need and poorer health.

With regards to the interaction between age and education level, a graph of predicted probabilities (Appendix A) showed that overall, Francophone seniors aged 65 years and over had a higher probability of poorer self-rated health than those aged 50-64 years regardless of education levels.

Table 4.3: Factors associated with minority Francophones' self-rated health

Factors		Beta Coeff.	SE Beta	C.I.	Wald F	P-value
Intercept		3.01	0.11	(2.81; 3.22)	820.89	0.0000
Importance Health Services in Min Language [no/yes(ref)]		-0.07	0.05	(-0.17; 0.03)	1.86	0.1731
Doctor services	Saw doctor less three times	-0.43	0.05	(-0.53; -0.33)	73.15	0.0000
	Saw doctor often	0.45	0.07	(0.31; 0.59)	40.81	0.0000
	Saw doctor regularly (ref)					
Use of Nurse Services [yes/no(ref)]		0.17	0.05	(0.07; 0.28)	10.29	0.0014
Location	Western Provinces	-0.13	0.06	(-0.25; -0.01)	4.24	0.0397
	Maritime Provinces	0.05	0.05	(-0.05; 0.16)	1.06	0.3025
	Ontario (ref)					
Sex [male/female(ref)]		0.05	0.05	(-0.04; 0.15)	1.33	0.2486
Age [65+ years/50-64 years(ref)]		-0.04	0.07	(-0.18; 0.09)	0.38	0.5379
Marital Status [no partner/partner(ref)]		0.12	0.05	(0.02; 0.23)	5.14	0.0236
Education	High School education	-0.34	0.07	(-0.48; -0.2)	21.83	0.0000
	Post-secondary education	-0.22	0.09	(-0.41; -0.04)	5.95	0.0149
	Less than High School(ref)					
Sense of Belonging	Belonging to Francophone group	-0.18	0.08	(-0.34; -0.02)	5.02	0.0252
	to both ANG & FR groups	-0.09	0.07	(-0.23; 0.05)	1.67	0.1969
	to Anglophone group(ref)					
Vitality of Minority language Community [strong/weak(ref)]		-0.16	0.05	(-0.25; -0.06)	9.72	0.0019
Social Support	From comm. Res. & public inst.	0.15	0.05	(0.05; 0.26)	8.43	0.0038
	Support from Nobody	0.32	0.12	(0.09; 0.55)	7.46	0.0064
	Support from family & friends(ref)					
Literacy Level (Reading) [poor/good(ref)]		0.27	0.06	(0.15; 0.39)	19.98	0.0000
Hours spent watching TV [>14 hrs/<14 hrs(ref)]		0.15	0.05	(0.05; 0.24)	9.74	0.0019
Practice of sports	Practice sports sometimes	-0.15	0.06	(-0.26; -0.04)	6.7	0.0098
	Practice sports often	-0.28	0.07	(-0.42; -0.14)	15.24	0.0001
	Practice sports regularly(ref)					
Community visibility	Strong visibility of Min Lang	-0.11	0.06	(-0.23; 0.01)	3.25	0.0717
	Medium visibility of Min Lang	-0.09	0.06	(-0.2; 0.02)	2.63	0.1055
	Weak visibility(ref)					
Low Income Cut-Off [below/above(ref)]		0.13	0.06	(0.02; 0.25)	5.07	0.0245
Rural/urban residence [rural/urban(ref)]		-0.07	0.05	(-0.16; 0.03)	1.88	0.171
Concentration of Minority group [high/weak to medium(ref)]		0.17	0.06	(0.06; 0.28)	8.87	0.003
Interaction between sex and education level						
Age*post-secondary education		-0.28	0.12	(-0.52; -0.04)	5.07	0.0246
Age*high school education		0.04	0.1	(-0.16; 0.24)	0.16	0.6849

4.4.3. Health services use of Francophone seniors as a determinant of their self-rated health

Using a multiple linear regression, a sub-analysis was conducted with a subsample of respondents who had accessed, at least once in the past twelve months, a doctor, a nurse, or any other place of health services. The resulting model (Table 4.4) below showed that *using hospital services* and *using clinic services* compared to *using no service at all* were each associated with poorer self-rated health. However, *the importance of receiving health services in the minority language* was not significantly associated with self-rated health among minority Francophone seniors who had accessed at least one health service.

Table 4.4: Explanatory factors of self-rated health of Francophones (by health services and age)

Factors		Francophone seniors outside of Quebec							
		Fr. Seniors Main		Health Services		50-64 Age-group		65+ Age-group	
		Beta	P-value	Beta	P-value	Beta	P-value	Beta	P-value
Importance Health Services [no/yes(ref)]		-0.07	0.1731	-0.04	0.4614	-0.09	0.1682	-0.05	0.4939
Doctor services	Saw doctor less than 3 times	-0.43	0.0000	-0.41	0.0000	-0.43	0.0000	-0.42	0.0000
	Saw doctor often	0.45	0.0000	0.47	0.0000	0.49	0.0000	0.4	0.0000
	Saw doctor regularly(ref)								
Use of nurse services [no/yes(ref)]		0.17	0.0014			0.14	0.0431	0.26	0.0006
Location (rest of Canada)	Western provinces	-0.13	0.0397	-0.11	0.0903	-0.15	0.0783	-0.08	0.3614
	Maritime provinces	0.05	0.3025	0.01	0.7985	0.04	0.5996	0.08	0.2877
	Ontario(ref)								
Location (in Quebec)	Montreal								
	Outside of Montreal(ref)								
Sex [male/female(ref)]		0.05	0.2486	0.04	0.376	0.11	0.093	-0.04	0.5989
Age [65+years/50-64 years(ref)]		-0.04	0.5379	-0.05	0.5015				
Marital status [no partner/partner(ref)		0.12	0.0236	0.13	0.0195	0.14	0.0835	0.07	0.3332
Education	High school education	-0.34	0.0000	-0.31	0.0001	-0.28	0.0003	-0.38	0.0000
	Post secondary education	-0.22	0.0149	-0.20	0.0226	-0.47	0.0000	-0.27	0.0036
	Less than high school(ref)								
Sense of belonging	to Francophone group	-0.18	0.0252	-0.22	0.007	-0.21	0.0581	-0.13	0.248
	to both FR & ANG groups	-0.09	0.1969	-0.12	0.1036	-0.12	0.222	-0.04	0.6788
	to Anglophone group (ref)								
Vitality of min language community		-0.16	0.0019	-0.16	0.0018	-0.18	0.0101	-0.13	0.0566
Social support	from comm. Res. & public inst.	0.15	0.0038	0.20	0.0006	0.17	0.0234	0.13	0.0789
	from nobody	0.32	0.0064	0.30	0.0271	0.36	0.0264	0.24	0.1123
	from family & friends(ref)								
Literacy level (reading) [poor/good(ref)]		0.27	0.0000	0.29	0.0000	0.38	0.0000	0.13	0.126
Hours spent watching TV [>14 hs/<14hrs(ref)]		0.15	0.0019	0.13	0.0095	0.2	0.0026	0.06	0.3448
Practice of sports	Practice sports sometimes	-0.15	0.0098	-0.16	0.007	-0.15	0.0282	-0.16	0.0943
	Practice sports often	-0.28	0.0001	-0.28	0.0001	-0.29	0.0009	-0.26	0.0152
	Practice sports regularly(ref)								
	Strong visibility of min lang	-0.11	0.0717	-0.11	0.1083	-0.03	0.7155	-0.24	0.0069

Community visibility	Medium visibility of min lang	-0.09	0.1055	-0.10	0.093	-0.04	0.6452	-0.19	0.0162
	Weak visibility(ref)								
Low income cut-off [below/above(ref)]		0.13	0.0245	0.12	0.0561	0.06	0.536	0.21	0.0052
Rural/urban residence [rural/urban(ref)]		-0.07	0.171	-0.06	0.2391	-0.05	0.4086	-0.09	0.1861
Concentration of Min grp [high/weak-		0.17	0.003	0.20	0.0006	0.15	0.0406	0.19	0.0251
Interaction between sex and education level									
Age*post-secondary education		-0.28	0.0246	0.27	0.0386				
Age*high school education		0.04	0.6849	0.16	0.9596				
Use of health services (place)	Hospital services			0.27	0.0000				
	Clinic services			0.16	0.0069				
	Other services			0.23	0.0768				
	Used no services(ref)								
		R-Square: 0.250		**R-Square: .259**		**R-Square: 0.258**		**R-Square: 0.203**	

4.4.4. Self-rated health among Francophone seniors aged 50-64 compared to those aged 65 years and over

As seen in Table 4.4 above, the variable *importance of health service in minority language* was not associated with self-rated health for Francophone seniors regardless of age groups. However, use of health services variables such as use of *doctor services* and *use of nurse services* were significantly associated with self-rated health for both age groups. The strength of the association for *doctor services* was similar across age groups but for *use of nurse services* the older age group showed a stronger association with self-rated health. With regards to *concentration of minority language community*, seniors 65 years and over who lived in *areas of high concentration* as opposed to *weak to medium concentration areas* tended to rate their health more poorly than the younger age group living in the same areas.

Other notable findings include the association between the *vitality of the minority community* and self-rated health. In fact, seniors aged 50-64 who felt that the vitality of their minority community was strong tended to rate their health better than those who felt their community had weak vitality. This association was not significant for the older age group. Also, *receiving social support from community resources and public institutions* and *receiving no support at all* (as opposed to *receiving support from family and friends*) were each significantly associated with poorer self-rated health for the younger age group while not showing any association at all for the older age group. Similarly, *literacy level* and *hours spent watching TV* were all significantly associated to self-rated health for the 50-64 age group while there was no significance at all for the older age group. Conversely, *medium* and *strong visibility of minority language community* as opposed to *weak visibility* were each significantly associated with better self-rated health for the 65+ age group but no significance was noted for the younger age group.

Another important finding was that income was significantly associated with self-rated health for the older age group but not for the younger age group. In fact, being *below the LICO* for Francophone seniors aged 65+ as opposed to being *above the LICO* was associated with poorer self-rated health. Income levels as measured by being either above or below LICO did not affect the 50-64 age group.

4.4.5. Factors affecting self-rated health appraisal among Francophone seniors in minority situation compared to Anglophone Minority Seniors in Quebec

The study also compared the results with Anglophone seniors living in Quebec, the other Official Language Minority group. Table 4.5 below shows the beta coefficient and the p-values from the multiple linear regression output for Anglophone seniors living in Quebec side by side with that of Francophone seniors. As seen with the Francophone sample, Anglophone seniors living in Quebec were more likely to report poorer self-rated health if they used health services or used them more frequently.

For Anglophone seniors living in Quebec, the *importance of receiving health services in the minority language* was significantly associated with self-rated health. This was not the case for Francophone seniors outside of Quebec. Among Anglophone seniors in Quebec, those who reported that it was *not important to access health services in the minority language* were more likely to report a poorer self-rated health than those who thought it was important to do so.

With regards to the *concentration factor of the minority community*, and unlike the finding in the Francophone minority community, there was no significant association derived

from the multiple linear regression model. Also surprisingly, *living in Montreal* as opposed to *living outside of Montreal* was not significantly associated with self-rated health.

Differences observed between the two populations with regards to other explanatory variables showed that *marital status, sense of belonging to the minority language community*, *social support* and *hours watching TV* were significantly associated with self-rated health among Francophone seniors outside of Quebec but not among Anglophone seniors in Quebec.

With regards to the interaction between age and education level, a graph of predicted probabilities (Appendix B) showed that overall, as was the case with Francophone seniors, Anglophone seniors aged 65 years and over had a higher probability of poorer self-rated health than those aged 50-64 years regardless of education levels.

Table 4.5: Comparing factors associated with minority Francophone seniors' self-rated health with that of Anglophone seniors

Factors		Francophone Seniors outside QC		Anglophone seniors in QC	
		Beta	**P-value**	**Beta**	**P-value**
Importance Health Services [no/yes(ref)]		-0.07	0.1731	0.25	0.0028
Doctor services	Saw doctor less than 3 times	-0.43	0.0000	-0.33	0.0000
	Saw doctor often	0.45	0.0000	0.46	0.0000
	Saw doctor regularly(ref)				
Use of nurse services [no/yes(ref)]		0.17	0.0014	0.16	0.0182
Location (rest of Canada)	Western provinces	-0.13	0.0397		
	Maritime provinces	0.05	0.3025		
	Ontario(ref)				
Location (in Quebec)	Montreal			-0.05	0.5006
	Outside of Montreal(ref)				
Sex [male/female(ref)]		0.05	0.2486	0.03	0.6375
Age [65+years/50-64 years(ref)]		-0.04	0.5379	0.02	0.8175
Marital status [no partner/partner(ref)		0.12	0.0236	0.08	0.21
Education	High school education	-0.34	0.0000	-0.09	0.3015
	Post secondary education	-0.22	0.0149	-0.24	0.011
	Less than high school(ref)				
Sense of belonging	to Francophone group	-0.18	0.0252	0.16	0.1922
	to both FR & ANG groups	-0.09	0.1969	0.12	0.032
	to Anglophone group (ref)				
Vitality of min lang com [strong/weak(ref)]		-0.16	0.0019	-0.01	0.8914
Social support	from comm. Res. & public inst.	0.15	0.0038	0.07	0.307
	from nobody	0.32	0.0064	0.23	0.0981
	from family & friends(ref)				
Literacy level (reading) [poor/good(ref)]		0.27	0.0000	0.26	0.0000
Hours spent watching TV [>14		0.15	0.0019	0.08	0.1319
Practice of sports	Practice sports sometimes	-0.15	0.0098	-0.13	0.0352
	Practice sports often	-0.28	0.0001	-0.27	0.0028
	Practice sports regularly(ref)				
Community visibility	Strong visibility of min lang	-0.11	0.0717	-0.13	0.0863
	Medium visibility of min lang	-0.09	0.1055	-0.05	0.4906
	Weak visibility(ref)				
Low income cut-off [below/above(ref)]		0.13	0.0245	0.25	0.0002
Rural/urban residence [rural/urban(ref)]		-0.07	0.171	-0.07	0.3319
Concentration of Min grp [high/weak-		0.17	0.003	0.08	0.264
Interaction between sex and education level					
Age*post-secondary education		-0.28	0.0246	-0.25	0.0639
Age*high school education		0.04	0.6849	-0.28	0.024
		R-Square: 0.250		**R-Square: 0.180**	

4.5. Discussion

According to the findings above, linguistic minority status combined with other factors affect the self-rated health of minority Francophone seniors living in Canada; surprisingly however, it is not independently associated with it. It also confirmed the association between use (or increased use) of health services and declining (self-rated) health. This association remained even within the age group models. Finally, this study demonstrated that seniors' experience from both Official Language Minority groups is similar but also presents a few significant differences between Anglophones in Quebec and Francophones outside of Quebec. No significant differences were found between male and female seniors.

For Official Language Minority seniors living in Canada, this study confirmed the association between their self-rated health and variables commonly known to determine health such as income, education, and other socio-economic status variables.[114] For minority Francophone seniors, strong *vitality of minority language community*, *sense of belonging to the francophone community*, strong *visibility of minority community*, and high *literacy levels* were independently positively associated with self-rated health. Conversely, self-rated health was negatively associated with li*ving in high concentration minority community areas, finding it important to have health services in the minority language, receiving social support from community resources and public institutions, and using health services*.

Under normal circumstances, living in high concentration areas for minority community members should be the source of increased health benefits such as reduced mortality and better health due to better access to health services in general and hopefully in the minority language.[115,116] However, in the case of seniors, a move to the city is often prompted by declining independence and deteriorating health in order to access specialized services more

readily within reasonable driving distances.[117,118] This trend of seniors moving to cities as a result of their declining health may lead to the false impression that high concentration areas are a risk factor for poorer health.[119] In fact, Francophone seniors living in a minority situation with poorer health status seek services where they are available and often move in assisted living situations available in higher concentration areas. It has also been argued that lack of health services in rural and remote areas does not necessarily translate into poor health. In fact, community social support, close ties as well as a deep and shared understanding of community may play an important role in the overall sense of health and well-being.[120] A study looking at health status and racial minority concentration found that there was no association for ethnic groups except for older whites aged 65-74 years.[121] In the current study, the association between concentration of minority language community and self-rated health remained for both Francophone age groups 50-64 years and 65 years and over. However, with Anglophones in the Quebec sample, no association was found between concentration of minority community and self-rated health. This finding corroborates other studies that have identified no association between area density of ethnic minority groups and self-rated health.[122] It appears therefore that other factors such as the characteristics of the minority community environment which may include the visibility of the minority community or the vitality of the minority community, and the availability and accessibility of health services in the minority language, may play a more important role than the concentration factor itself.

With regards to social support, there is clear evidence in the literature that it contributes significantly to health status. However, the question about who provides social support seems critical. For example, support from community resources and public institutions may not be adequate in many cases as the study results suggest. Although community support is often

valued, it may not live up to the perceived expectations of residents. Skinner et al., looking at the impact of community support on health concluded that there is a great deal of complexity and ambiguity with regards to the understanding of community and the support role the community may play in the lives of seniors.[120]

Among the sub-group of respondents who used health services, doctor services and nurse services, each service utilization variable was significantly associated with poorer self-rated health. In the literature, both using health services and not having access to health services have been found to be associated with poorer self-rated health. The association between use of health services or higher frequency of use of health services and poorer self-rated health may be due to the fact that those using health services are already in poor health.[123,124] On the other hand, not using health services as a result of not having access to health services has also been found to be associated with poorer self-rated health.[125] The issue may lie in determining when not using health services is due to barriers to access rather than not accessing health services due to good health. However, in the Canadian context where universal healthcare is supposed to ensure access to health services to all, we can reasonably understand why not using health services in this study was associated with better self-rated health. Studies such as that of Turner et al. found that there was an 87% increase in the odds of reporting poor self-rated health among people without private health coverage in the U.S. compared with those with such additional health coverage.[126] The relationship between access to health services, language, or other determinants, and self-rated health may be bidirectional as some studies have suggested. Just as these determinants affect self-rated health, so does self-rated health have an impact on them in return. For example, in a New Zealand study, Flett and colleagues looked at the predictors of health care utilization in the local ethnic community of Maori elders and found that self-rated health was a

significant predictor of doctor visits.[127] Prospective studies rather than cross-sectional studies such as this one may be more adequate in determining the direction of the association between health services use and self-rated health.

Not much research has been published with regards to the importance of receiving health services in the minority language. However, it is known in general that good, effective or satisfactory clinician-patient communication with seniors is associated with better health outcomes.[128,129,130] In fact, language barriers can lead to disparities in the health of minority populations compared to the general population. [84,86,87,88,131] This may explain why descriptive and multivariable analyses showed that seniors who considered that it was important to receive health services in the minority language tended to have poorer self-rated health than those who did not think that it was important. Importance given to access to health services in the minority language may therefore signal that these respondents consider language as an integral part of the quality of their health care. If minority Francophone seniors who find it important to have health services in the minority language are expressing a felt need that is not being met, this lack of provision may actually contribute to their poorer health status.

With regards to age groups, this research did not show a marked difference between those 50-64 years old and those 65 years and over, except for an increased strength of the association generally noticeable for the older age group. This suggests that as age increases, so does health services use due to poorer health. This finding corroborates the universally accepted fact that with age comes declining health status.[132,133,134,135]

A comparison with minority Anglophone seniors living in Quebec based on the multivariable analysis models showed that the two linguistic groups may have in common their minority status and face similar challenges such as language issues with regards to access to and

use of health services. However, their contexts are very different. Contrary to minority Francophone seniors who are spread over a larger geographic area, minority Anglophone population groups in Quebec enjoy a closer proximity to one another The Francophone population outside of Quebec may also be more diverse than the Anglophone population in Quebec. It is further important to note that the Anglophone population clustered around Montreal is unique and only in New Brunswick is there an equivalent and comparable Francophone concentration. The rest of the Francophone population is often made up of small pockets of Francophones whose number is negligible. These contextual realities, among others, impact on the provision of, access to, and use of health services as well as on the appraisal of one's health. This may be helpful in explaining some of the ambiguities in the findings.

This study presents several limitations. The cross-sectional design prevents us from knowing the direction of the association and whether or not the independent variables preceded the outcome variable. We also found that we could not use many of the variables deemed important for this study because of a high number of missing cases. Questions that could have been asked to all the survey respondents were asked only of a few hence, limiting their usefulness. With a low R-square value of 0.250 the multiple linear regression model was able to explain only 25% of the variation in the outcome variable *self-rated health*. This is probably due, as pointed out above, to the fact that some key variables in the "need" component of the Andersen model of health services use were not available. Ideally, a multiple linear regression model should include continuous variables and not categorical variables. Multinomial logistic regression was considered; however, the high number of small cells excluded such a possibility. As a result, the use of multiple linear regression with solely categorical variables might have impacted on the magnitude of the linear correlation between variables and on the low R-squares

observed. Breakdown points for categorical variables recoded as binary or dummy variables may not have been adequately chosen and this may lead to bias or outliers.[136] In this study, breakdown points were chosen with circumspection and attention was paid to frequency distribution before transforming variables with more than two categories into binary variables. Moreover, the versatility and robustness of multiple linear regressions still yielded a solid and adequate statistical model that met all the key assumptions as noted above. A final limitation is the fact that this study does not allow for comparability with the majority population since the survey was carried out only within the Official Language Minority populations and not among the general Canadian population.

4.6. Conclusion

Despite these limitations, this study which benefits from a strong sampling design, confirms some of the common variables associated with self-rated health in vulnerable populations. However, it fails to build a more robust explanatory model that would explain more than 25% of the variance. Factors such as the use of health services, concentration of the minority community, and the importance of health services in French, which are variables relevant in the Canadian context were found to uniquely impact the self-rated health of minority Francophone seniors. This study highlights the importance of key aspects of Official Language Minorities such as the sense of belonging to the community, the vitality of the minority community, and the concentration of the minority community as factors that affect seniors' self-rated health as well as access to and use of health services. Policies facilitating greater connectedness among seniors of Official Language Minority status, and increased institutionalization of services and activities would enhance the vitality and minority density and

by the same token, help improve their health status. It is hoped that further studies will be carried out to generate a more in-depth understanding of how concentration of minority community and importance of health services in the minority language affect the self-rated health of Official Language Minorities in Canada.

The health status of Official Language Minority seniors throughout Canada might improve greatly by: improving the Official Language Minority Community linguistic environment, facilitating access to health services in the minority language, enhancing community vitality and community visibility, pooling minority language community resources together, and working towards an increased sense of belonging to the minority language community.

Note liaising article I and II

The purpose of the paper entitled "Determinants of Self-rated Health of Francophone Seniors in Minority Situation in Canada" met the first and second objectives of the overall research for this thesis. From this paper, we are able to ascertain some of the characteristics of minority Francophone older adults' access to health services and the determinants of their self-rated health, and compare them with their minority Anglophone counterparts in Quebec. In that regard, this research showed that while there were some differences between the two OLM groups, use of health services was associated with poorer self-rated health for both. Since this part of the research was based on the 2006 SVOLM and focused exclusively on members of Canada's two OLMCs, the need for comparison with the general population was paramount in order to understand and situate OLMCs' access to health services and the determinants of their self-rated health within the broader Canadian context. To that end, the following paper entitled "Official Language Minority Status and Self-rated Health among Older Adults in Canada" stems from the analysis of the 2007 CCHS (cycle 4.1) to fulfill objective three of this dissertation.

5. Article II: Official Language Minority Status and Self-rated Health among Older Adults in Canada

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5.1. Introduction

Canada with its two official languages, English and French, its Aboriginal population at 3.8% and its influx of foreign born immigrants accounting for 19.8% of the population is a vast and diversified country.[137] Within this context, the older adult population grew 14% between 2006 and 2011 and represents about 15% of the total population.[138] As part of this demographic shift due to longer life expectancy and low birth rates, it is predicted that by 2030 and 2061, 22.6% and 25.5% respectively of the population will be 65 years and older.[139,140,141] Among the Official Language Minorities (Anglophone in Quebec and Francophone outside Quebec) the proportion of 65 years and older is 19% higher than their majority status counterparts according to the 2001 census[142]. The gradual aging of the Canadian population is quite significant and is

starting to trigger a whole set of challenges at the individual and the population levels from personal health concerns to appropriate health services and manageable health systems and policies. With older age come increasing vulnerability and poorer health. For example, health issues facing the aging population include chronic and acute diseases, injuries, mental and psychological issues, loss of autonomy, and impairment.[66,143,144]

When considering the diversity of the population of older adults, many factors such as geography, income, education, and social support constitute either assets or barriers for being in good health. It is also documented that people in a minority situation tend to have more challenges in accessing health services which in turn, may lead to a poorer health status compared to the general population.[65,104] Although recent studies have examined Official Language Minorities' health and their access to health services, none has focused on the individual health impact of Official Language Minority status among older adults compared to the general Canadian population. Therefore, the purpose of the research reported here was to assess the relationship between minority status and self-rated health among Canadian older adults using the 2007 Canadian Community Health (CCHS) survey and discuss the results in light of findings from the post-census survey on the Vitality of Official Language Minorities (SVOLM).[145,63]

5.2. Highlights of relevant Literature

5.2.1. Minority status and health

Official Language Minority research is still a new area of inquiry not only in Canada, but also in other countries with more than one official language. Whereas it is unclear to what extent

individuals from official language communities face health issues in relation to their minority situation, a large body of research already demonstrates that Aboriginal peoples, and ethno-cultural minorities, especially people of African, Asian, and Latino descent are disadvantaged in terms of overall mortality and morbidity.[7,13,14] In including these minorities of non-official language in this literature review, we wish to show the impact of minority status on health while acknowledging the sharp difference between Official Language Minority status and Aboriginal minority status on the one hand, and ethno-cultural minority status on the other. Even though OLMs have undergone oppression, discrimination, marginalization, neglect, and assimilation, the official language status in general acknowledges even for individuals of official languages in a minority situation, a position in society socially stronger than that of other minority groups such as Aboriginals and individuals from ethno-cultural groups. The laws governing official language status guarantee at least on paper, a number of privileges and rights that official language community members can expect, whether in a majority or minority situation. Such is often not the case for Aboriginal people and ethno-cultural minorities, who often rely on the good will of the government. Aboriginal people in Canada have suffered discrimination and oppression since the first explorers reached the shores of North America. The expropriation of their lands and their subsequent relocation to reserves destroyed their social, cultural, and linguistic fabric and has led to significant challenges affecting them even today. For example, in terms of life expectancy, Aboriginal people in Canada live on average seven years shorter than the general Canadian population.[208] No minority group in Canada has suffered such a high degree of assimilation, oppression, and minoritization. Close to Aboriginal people in terms of the degree of minoritization are ethno-cultural minorities. These are minority groups such as Afro-Canadians, African Americans, and to a lesser degree of minoritization, but belonging to the same category

of ethno-cultural minorities, people of Asian and Latin American descent. As a result, the complexity and the greater level of oppression, assimilation, and minoritization faced by Aboriginal people and ethno-cultural minority groups need not be confused with the situation of minorities of official languages, which is generally better. The Aboriginal and ethno-cultural minority cases highlighted here enable a greater understanding of the impact of minority status on the health of minority community members in general regardless of whether they are Aboriginal, ethno-cultural, or of official languages.

Studies in countries across the globe show that minority groups generally tend to be in poorer health than the general population[146]. In the United Kingdom for example, individuals of African descent and people from other minority ethnic communities tend to have more difficulties accessing and using health care services, be in poorer health, and experience a shorter life expectancy than the majority population.[147] In various European countries, immigrant communities and other minority groups suffer more depressive symptoms than the majority population.[148] It is also widely acknowledged that the Roma people, a minority group present in many countries across Europe, are in significantly poorer health than the majority population in Europe and face important access issues to health care services.[149,150,151] In the United States, similar challenges are encountered by minority groups such as blacks or African Americans, Hispanics or Latinos, American and Alaska indigenous peoples, Asian Americans, and other ethnic minorities.[152] In Australia and New Zealand, aboriginal populations who are an important minority group in both countries are shown to be systematically in poorer health than the general population.[153,154,155,156,157] They experience higher levels of ill health and disability and a poorer

quality of life and are three times more likely to be admitted in hospital than other Australians.[158,159]

In Africa, the rates of morbidity as well as of infant and adult mortality are higher among indigenous minority communities than among the general population of countries within which they live.[160,161,162] The Mbuti in the Democratic Republic of Congo and the Baka in Cameroon have significantly higher rates of parasite infections, leprosy, tuberculosis, and water-borne diseases than the rest of the population in both countries.[163,164,165] In addition, indigenous minorities in Africa have an extremely poorer access to health care services than the general population in the countries in which they live.[166,167,168]

In Canada, health disparities between minority groups and the general population have also been reported.[169,170] For example, people from minority groups such as Black or African Canadians and South-Asian Canadians experience significantly poorer health outcomes than the general population.[171,172,173] In addition, First Nation, Métis, Inuit, and other Aboriginal people in Canada suffer disproportionate higher rates of suicide, injury, substance abuse, infectious and chronic diseases and have a significantly shorter life expectancy than the general population.[174,175,176]

Older minority group members tend to be in an even poorer health than others in their own minority communities.[177,178] This puts them at a greater disadvantage compared to the majority population. In the United States, minority group members aged 65 years and older have been found to be more likely than their counterparts in the general population to report poor

health, and less likely to receive preventative treatments such as vaccinations and cancer screenings.[179] In Canada, older Aboriginal people are twice as likely to be hospitalized due to a fall compared to the Canadian general population of older adults.[180] Also, older Chinese Canadians have been found to be in poorer health than their Canadian born counterparts.[181] It should be noted that these health disparities between minority groups and the majority population in countries across the globe are related to long-standing economic, political, and social disparities, which affect minority groups more acutely.[182,183]

5.2.2. Official Language Minority Canadians

Canada counts more than one million French speakers outside of Quebec (3% of the general Canadian population) and about the same for English speakers in Quebec (13% of the total population of Quebec). Together, the Official Language Minority population represents about 6% of the Canadian population.[184] Research into the extent to which these two Official Language Minority groups are in poorer health and have less access to health services is still at the beginning stage with mixed results. According to recent research, Francophone minorities tend to rate their health poorer than the Anglophone majority outside of Quebec although one of the studies found no difference among women.[65,185] Using secondary data analyses, Bélanger et al found no evidence of poorer health of the Francophone minority in New-Brunswick.[186] In Quebec, Anglophone minorities have been shown to rate their health poorer than the Francophone majority with a widening gap for Anglophones living outside the greater Montreal area.[187] A Quebec study however, showed that Anglophone minorities in Quebec experience a longer life expectancy than the majority population but attributed this in greater part to the significantly high rates of smoking among French Quebecers.[188]

5.2.3. Constitutional framework for official languages

The Canadian Constitution, as established under the British North American (BNA) Act (1867) and augmented with the Canadian Charter of Rights and Freedoms (1982) recognizes French and English as the official languages of Canada. The Constitution creates linguistic obligations for the federal government and all its institutions, and for the Governments of Quebec and New Brunswick. Manitoba also has constitutional linguistic obligations arising from the Manitoba Act (1870).[189] These constitutional obligations were further enhanced with other federal legislation such as the Official Languages Act (September 9, 1969). The objective of this act is to support Official Language Minority Communities and advance the equal status and use of the English and French languages within Canadian society. This Act strives for equal respect, and equality of status, rights and privileges for both official languages, with regards to their use within federal institutions.[28] Further amendments to the act, in 1988 and amendments to part VII in 2005, have contributed to increased responsibility on the part of federal as well as provincial institutions to ensure increasing vitality of Official Language Minority Communities.[190] So enshrined in the Canadian constitution and enhanced by the Official Languages Act, Official Language Minority Communities have legitimacy, rights and expectations, including the provision of services in their own language. Hence, the Canadian Constitution and the Official Languages Act provide a framework and context for this study.

5.2.4. Highlights and limits of the post-census Survey on the Vitality of Official Language Minorities (SVOLM)

A previous study examined the determinants of older adults' self-rated health within Canada's Official Language Minorities.[191] Based on a secondary analysis of Statistics Canada's 2006 post-census Survey on the Vitality of Official Language Minorities (SVOLM), the main findings identified that sense of belonging to the minority community, vitality of the minority community, and concentration of the minority community affect older adults' self-rated health. These determinants were shown to have an impact on their access to and use of health services. The results of that study led to an inquiry into how those findings would compare to the general population. However since the SVOLM did not include data on the general population, another data source was used which includes a sample of both the general population and Official Language Minorities, that of Canadian Community Health Survey (CCHS).

5.3. Methods

5.3.1. Study Design

The Canadian Community Health Survey (CCHS) was carried out by Statistics Canada in 2007 in the 10 Canadian provinces and three territories. Respondents aged 12 years and over lived in one of the 121 health regions across Canada's ten provinces and three territories. The sample of households was selected using three sampling frames: the area frame accounted for 49% of the sample of households, the list of telephone numbers sampling frame accounted for 50% and the Random Digit Dialling (RDD) sampling frame accounted for the remaining 1%. A total of 65,946 valid in-person or telephone interviews were conducted between January and December 2007 using computer assisted interviewing (CAI). The response rate was 77.6% for

65,946 respondents; of these, about 3,600 were respondents of Official Language Minority status.

5.3.2. Conceptual framework and Selection of Variables

5.3.2.1. Study population

Of the 65,946 respondents in the CCHS survey, a subset of 24,803 people represented older adults defined as persons 50 years and over. In this sample, 1,364 were members of Official Language Minorities, that is, Francophones living in Canada outside of Quebec and Anglophones living in Quebec. The criteria for belonging to either one of the two Official Language Minority Communities were as follows: being able to speak English/French either as language of conversation, or as first official language spoken, or as language most spoken at home or as language of interview. An algorithm was used to ensure that the study included the maximum number of Official Language Minority speakers.[65]

5.3.2.2. Selection of variables guided by the Andersen Model

The Andersen's Behavioural Model of Health Services Use, which was adapted for this study (Figure 5.1) served as a guiding framework. It is a model that has been widely used to assess factors that affect health services utilization, perceived and objective health status, as well as consumer satisfaction.[32]

In the 2007 CCHS, the question: "In general would you say your health is: excellent, very good, good, fair, poor?", otherwise called "self-rated health", was answered by all respondents, and therefore was selected as the outcome variable. As attested in the literature, self-rated health is a very reliable and valid measure of both subjective and objective health.[105,106]

The selection of explanatory or independent variables was primarily guided by the following: a) available information within the CCHS modules in relation to the Andersen model, b) the literature on self-rated health, c) the researchers' knowledge of Francophone older adults living in a minority context and d) the SVOLM study for comparison purpose. Variables were identified within four categories.

1) The environment category of the Andersen model included 3 variables: *language spoken with doctor, quality of healthcare in the community, and rural/urban residence*. With regards to the *quality of healthcare in the community*, respondents were asked to rate using the categories excellent, very good, good, fair and poor. The last two categories and the first three were collapsed to yield a binary variable with the following respective new categories: 1 for *poor* and 0 for *good* (reference category). Rural/Urban was categorized as 1 for *rural* and 0 for *urban* (reference category).

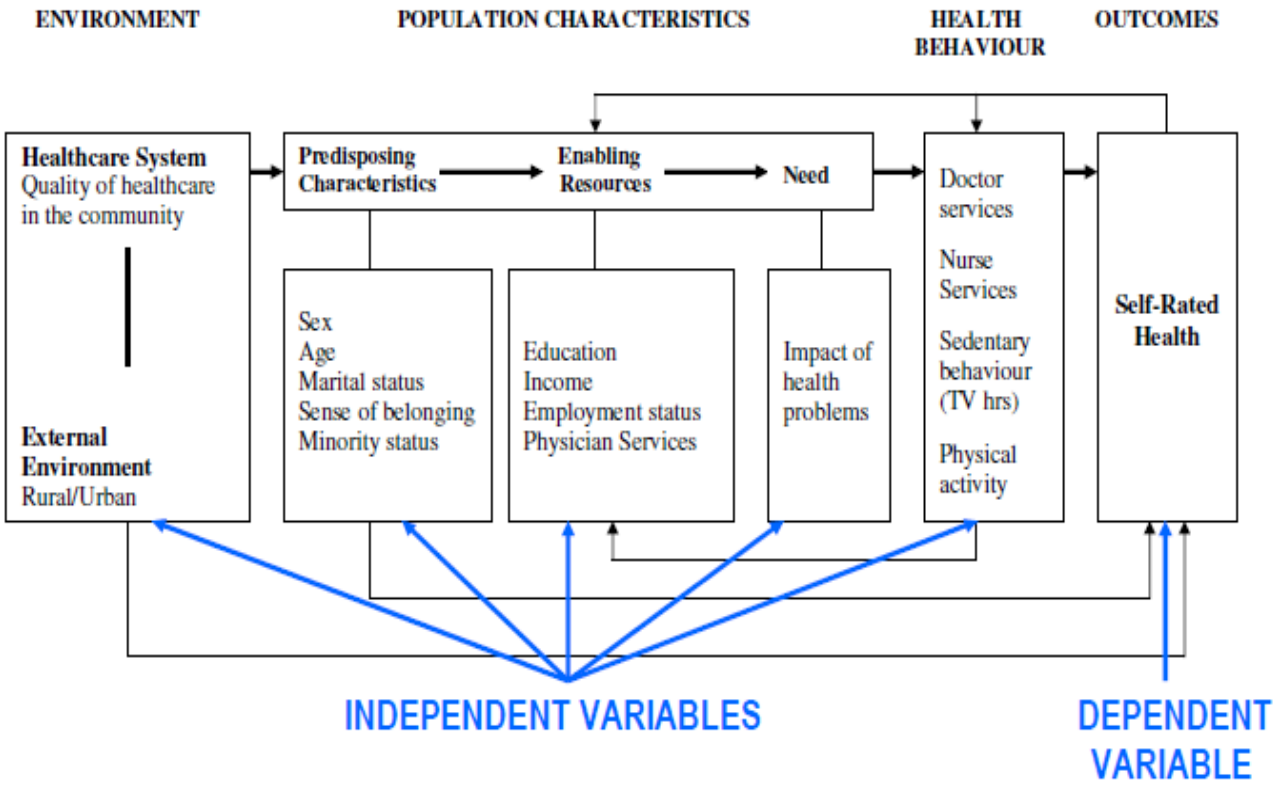
2) For the Population Characteristics, the Predisposing variables included the following information: *sex, age, marital status, sense of belonging*, and *minority/majority status*. Sex was measured as 1 for male and 0 for female (reference category). Age also had two categories: 1 for 65 years and over and 0 for 50 to 64 years (reference category). Marital status had two categories: with (1) or without (0) a partner. Sense of belonging to the community had two categories: 1 for weak and 0 for strong (reference category). *Minority/majority status* was defined in three categories: *official language minority* which included respondents speaking either French outside Quebec or English in Quebec, *other minority* (allophone minority) which referred to linguistic minority of languages other than French or English regardless of where they lived in Canada, and *majority* which was the reference category.

3) Enabling Resources comprised the *education, income*, and *employment status* variables. The *education variable had three categories: less than high school* (reference category), *high school, and post-secondary*. Income had two categories: *below $30,000* and *equal or above $30,000* (reference category). The $30,000 cut off was an approximation of the income level which in the income distribution in the CCHS, was closest to the national low income cut-off level defined by Statistics Canada. Employment status categorized respondents as *employed* (1) or *not employed* (0) within the last twelve months. The Need component of the Andersen model, *impact of health problem* variable is a crude measure of the impact or burden of long-term physical conditions, mental conditions and health problems on the main domains of life such as home, work, school, and other activities. Impact of health problems had two categories: 1 for *impact* and 0 for *no impact* (reference category).

4) The Health Behaviour component of the model included three variables. 1) **Use of *doctor's services*** was a categorical variable with the following categories: *less than three times, regularly* (reference category), and *often. Seeing the doctor regularly* amounted to seeing the doctor four to six times a year while seeing the doctor beyond six times a year was deemed *seeing the doctor often*. *Use of nurse services* was a binary variable with two categories: 1 for *did not consult a nurse* and 0 for *consulted a nurse* (reference category). 2) The variable ***hours spent watching TV*** was used as an indicator of sedentary behaviour with 14 hours per week as cut-off point. As a result, it had two categories with 1 for *greater than 14 hours of TV* and 0 for *equal to or less than 14 hours of TV* (reference category). 3) ***Physical activity***, based on a physical activity index that ranks total daily energy expenditure values in kcal/kg/day, had two categories: 1 for *active* and 0 for *inactive* (reference category).

Figure 5.1: Variables from CCHS 4.1 fitted in the Andersen Model [40]

(Adapted from Andersen)



5.4. Statistical analyses

Descriptive analyses including frequencies, cross tabulations, and bivariate linear regression analyses were carried out using Statistical Package for the Social Sciences (SPSS) version 19. Binary variables were coded with categories 0 and 1. 0 as the reference category was generally applied to categories with the highest number of cases. The outcome variable of self-rated health had five categories coded as follows: 1-Excellent, 2-Very Good, 3-Good, 4-Fair, 5-Poor. Since the outcome variable *self-rated health* was coded as mentioned above (the signs of

beta coefficients in the multiple linear regression output should be interpreted accordingly with the minus (-) sign indicating better self-rated health and the plus (+) sign indicating poorer self-rated health.

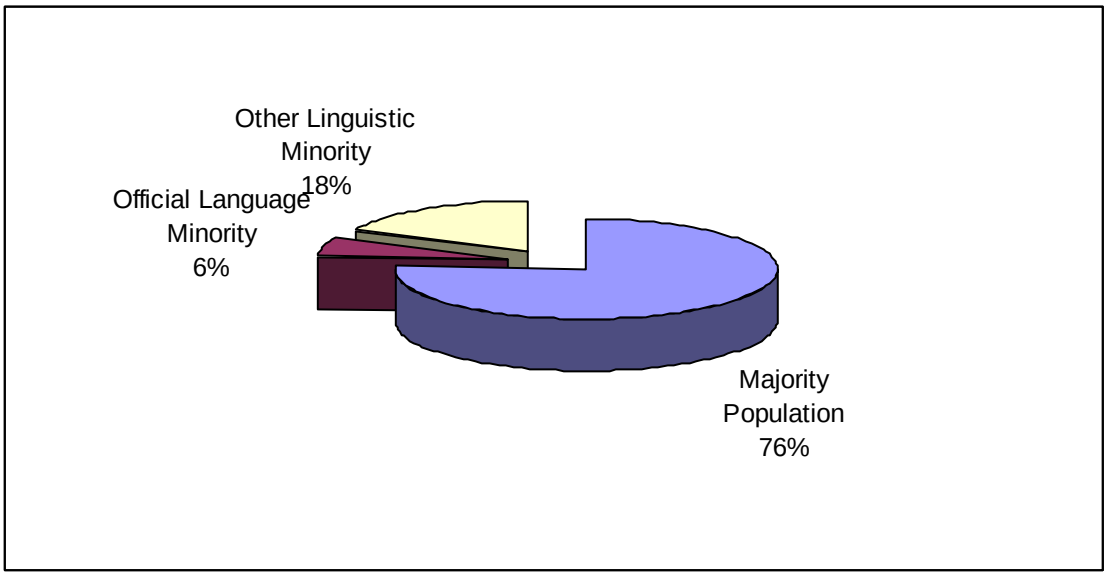
Key assumptions of multiple linear regression such as linearity, independence of errors, equality of variances (homoscedasticity) and normality were all verified. A manual backward selection approach done through SPSS 19 was used as all potential explanatory variables were included in the model initially. Variables were eliminated on the basis of non-significance ($P>0.05$) and of variable importance. When the main model was reached, a manual stepwise (forward) selection approach was used according to the Andersen model categories and/or components to assess the contribution of each to the model. Bootstrapping was done with SUDAAN in order to yield accurate standard errors estimation.[113]

5.5. Results

5.5.1. Selected descriptive results

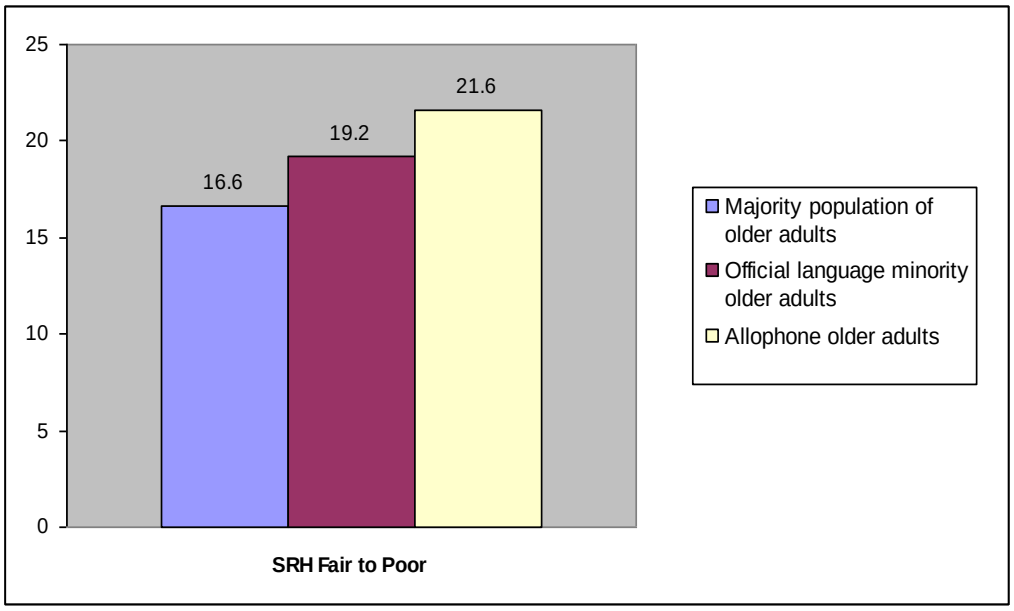
As seen below, Official Language Minorities represented only 6% of the total sample compared to the general population of older adults at 76%. Other minorities represented 18%.

Figure 5.2: Minority and majority proportions in the study sample



Cross-tabulation findings showed that 16.6% of those who spoke the official language in a majority context rated their health as fair to poor, compared to a 19.2% of those who spoke the Official Language Minority language and 21.5% Allophones.

Figure 5.3: Minority Status and self-rated health



In addition, as summarized in table 5.1, older adults with the following characteristics (all significant at $p<0.05$) rated their health more poorly: Being of minority status, whether of official language or allophone, being 65 years and older, having no partner, having a lower than high school education, having an income of less than $30,000 a year, seeing the doctor more than six times a year, watching TV for more 14 hours a week, being from the Maritimes, and not being employed. Women tended to rate their health as poorly as men because the difference of only 0.6% of poorer health for women was found to be negligible.

Table 5.1: Descriptive cross-tabulation findings

Variables		**Self-rated Health (Fair to Poor in %)**
Minority/Majority status	Official language minority	19.2
	Allophone minority	21.6
	Majority older adults	16.6
Age	>=65 years	22.6
	50-64 years	14.8
Sex	Females	18
	Males	17.4
Marital status	No partner	21.8
	Partner	15.9
Education	< High school	29
	High school	14.8
	Post-secondary	13.6
Income	< $30,000	31.3
	>= $30,000	13.3
Doctor services	> 6 times/year	40.6
	4 – 6 times/year	21.9
	< 3 times/year	8.2
TV hours	> 14 hours/week	23.6
	<= 14 hours/week	13.8
Location	Maritimes	22.4
	Ontario	18.2
	West	17.3
	Quebec	15.7
Employment status	Not employed	26
	Employed	10.3

5.5.2. Multivariable results

5.5.2.1. Official Language Minority status and Self-rated Health

The results from the CCHS analysis showed that Official Language Minority status among older adults aged 50 years and over was not associated with self-rated health as seen in table 5.2 below ($p=0.3336>0.05$). At the same time, our findings showed that being from allophone minority communities, who spoke none of Canada's official languages (compared to

belonging to the majority population of older adults), was associated with poorer self-rated health. When both allophone and Official Language Minority groups were combined to form a variable called *linguistic minority status*, an association was observed between linguistic minority status and self-rated health. People of linguistic minority communities were found to have poorer self-rated health than the majority population. Further analyses did not yield significant findings except for the sense of belonging to the community which was positively associated with the self-rated health of the majority population while no association was found with self-rated health among Official Language Minority Community members. It would appear that linguistic minority status of which Official Language Minority is only a part, is a determinant of self-rated health among Canadian older adults aged 50-64 years and 65 years and over.

5.5.2.2. Other determinants of self-rated health among Canadian older adults

The findings summarized in table 5.2 were all found to be statistically associated with poorer self-rated health: Being a man (compared to a woman), having a weak (as opposed to a strong) sense of community belonging, being unemployed (as opposed to employed), earning a yearly income of less than $30,000 (as opposed to equal or greater than $30,000), acknowledging that health problems have an impact on personal life (as opposed to not), being physically inactive (as opposed to active), seeing the doctor often i.e. seven times and over per year (as opposed to regularly i.e. three to six times a year), seeing a nurse (as opposed to not seeing one), leading a sedentary life i.e. watching TV over 14 hours per week (as opposed to watching TV less than 14 hours). Also, high levels of education and low use of health services had a positive effect. Having a high school education or a post-secondary education (as opposed to less than

high school education) and seeing the doctor less than three times a year (as opposed to seeing the doctor regularly i.e. three to six times a year), were all associated with better self-rated health.

Table 5.2: Determinants of self-rated health among Canadian older adults

Factors		Beta Coeff.	SE Beta	C.I.	Wald F	P-value
Intercept		2.13	0.04	(2.04; 2.21)	50.96	0.0000
Rural/urban residence [rural/urban(ref)]		0.03	0.02	(-0.02; 0.07)	1.17	0.2410
Sex [male/female(ref)]		0.15	0.02	(0.12; 0.19)	8.53	0.0000
Marital Status [no partner/partner(ref)]		0.02	0.03	(-0.04; 0.07)	0.59	0.5538
Sense of Belonging to community [weak/strong(ref)]		0.13	0.02	(0.09; 0.17)	6.60	0.0000
Age [65+ years/50-64 years(ref)]		-0.09	0.03	(-0.14; -0.04)	-3.51	0.0005
Employment status [Not Empl/Empl(ref)]		0.24	0.02	(0.20; 0.29)	11.18	0.0000
Income [<$30,000/>=$30,000(ref)]		0.25	0.02	(0.21; 0.29)	11.41	0.0000
Education	High School education	-0.18	0.03	(-0.23; -0.12)	-6.59	0.0000
	Post-secondary education	-0.25	0.02	(-0.30; -0.20)	-10.12	0.0000
	Less than High School(ref)					
Impact of health problems [Yes/No(ref)]		0.62	0.02	(0.58; 0.67)	28.94	0.0000
Physical activity [Inactive/Active(ref)]		0.26	0.02	(0.22; 0.29)	14.28	0.0000
Doctor services	Saw doctor less three times/yr	-0.31	0.02	(-0.36; -0.26)	-13.05	0.0000
	Saw doctor often	0.33	0.03	(0.27; 0.38)	11	0.0000
	Saw doctor regularly (ref)					
Use of Nurse Services [No/yes(ref)]		0.14	0.03	(0.08; 0.20)	4.80	0.0000
Hours spent watching TV [>14 hrs/<=14 hrs(ref)]		0.13	0.02	(0.09; 0.17)	6.83	0.0000
Minority status	Official Language Minority	0.04	0.04	(-0.04; 0.12)	0.97	0.3336
	Other (Allophone) minority	0.19	0.03	(0.13; 0.24)	6.32	0.0000
	Majority (ref)					
Marital status*Age		-0.10	0.03	(-0.17; -0.03)	-2.86	0.0045

5.5.2.3. Official Language Minority status and self-rated health across two surveys

To further understand the impact of Official Language Minority status on self-rated health, the CCHS findings were compared with those of the Survey on the Vitality of Official Language Minorities (SVOLM). The SVOLM model included both Official Language Minority Communities. The comparison of the two models was limited strictly to selected variables that were associated to self-rated health in both the SVOLM and the CCHS studies. Table 5.3 indicates only the strength of the association between self-rated health and its predictors and this was found to be different between the two models. For example, for both the Official Language Minority population and the Canadian general population of older adults, (increased) use of doctor services was associated with poorer self-rated health. However, the beta coefficient value was -0.31 for the general population of older adults and -0.40 for the Official Language Minority population suggesting the protective effect of seeing the doctor fewer than three times/year which is stronger within the Francophone minority community. Also, seeing the doctor often (more than 6 times/year) is associated with poorer self-rated health in both populations but with a stronger association within the Francophone minority population. Similarly, having an income of less than $30,000 was associated with poorer self-rated health in both studies but with a stronger association in the general population with a Beta coefficient value of 0.25 for the CCHS compared to 0.13 for the SVOLM survey. However, variables such as use of nurse services, being sedentary and post-secondary education had identical or nearly identical beta coefficients.

Table 5.3: Cross-survey comparison of SVOLM and CCHS

Factors		General Population (CCHS)		Official Language Minorities (SVOLM)	
		Beta Coeff.	P-value	Beta Coeff.	P-value
Income [<$30,000/>=$30,000(ref)]		0.25	0.0000	0.13	0.0000
Education	High School education	-0.18	0.0000	-0.23	0.0000
	Post-secondary education	-0.25	0.0000	-0.25	0.0001
	Less than High School(ref)				
Doctor services	Saw doctor less three times/yr	-0.31	0.0000	-0.40	0.0000
	Saw doctor often	0.33	0.0000	0.48	0.0000
	Saw doctor regularly (ref)				
Use of Nurse Services [No/yes(ref)]		0.14	0.0000	0.15	0.0002
Being sedentary (Hours spent watching TV [>14 hrs/<=14 hrs(ref)])		0.13	0.0000	0.13	0.0005

5.5.2.4. Linguistic Minority Status and self-rated health in the CCHS

Table 5.4 illustrates that Official Language Minority status was not associated with self-rated health when compared to the majority. However, when Official Language Minority and allophone minority were combined, the new variable minority status was found to be associated with self-rated health.

Table 5.4: Comparing main model with new linguistic minority status model

Factors			Official Language Minority Model		Linguistic Minority Model	
			Beta Coeff.	P-value	Beta Coeff.	P-value
Intercept			2.13	0.0000	2.13	0.0000
Rural/urban residence [rural/urban(ref)]			0.03	0.2410	0.02	0.4009
Sex [male/female(ref)]			0.15	0.0000	0.16	0.0000
Marital Status [no partner/partner(ref)]			0.02	0.5538	0.01	0.6468
Sense of Belonging to community [weak/strong(ref)]			0.13	0.0000	0.13	0.0000
Age [65+ years/50-64 years(ref)]			-0.09	0.0005	-0.09	0.0006
Employment status [Not Empl/Empl(ref)]			0.24	0.0000	0.24	0.0000
Income [<$30,000/>=$30,000(ref)]			0.25	0.0000	0.25	0.0000
Education	High School education		-0.18	0.0000	-0.18	0.0000
	Post-secondary education		-0.25	0.0000	-0.25	0.0000
	Less than High School(ref)					
Impact of health problems [Yes/No(ref)]			0.62	0.0000	0.62	0.0000
Physical activity [Inactive/Active(ref)]			0.26	0.0000	0.26	0.0000
Doctor services	Saw doctor less three times/yr		-0.31	0.0000	-0.31	0.0000
	Saw doctor often		0.33	0.0000	0.33	0.0000
	Saw doctor regularly (ref)					
Use of Nurse Services [No/yes(ref)]			0.14	0.0000	0.14	0.0000
Hours spent watching TV [>14 hrs/<=14 hrs(ref)]			0.13	0.0000	0.13	0.0000
Minority status	Linguistic Minority	Official lang. Min.	0.04	0.3336		
		Allophone minority	0.19	0.0000	0.15	0.0000
	Majority (ref)					
Marital status*Age			-0.10	0.0045	-0.10	0.0050
			R-Square: 0.323		R-Square: 0.322	

5.5.2.5. Self-rated health and age among Canadian older adults in the CCHS

Since there was an interaction between age and marital status, a graph of predicted probabilities was plotted and it was found that Canadian older adults aged 65 years and over had a higher probability of poorer self-rated health than those aged 50-64 years regardless of marital status (see Appendix C). In comparing the two age groups, the following findings were made:

Seeing a nurse (as opposed to not seeing one) was more strongly associated with the self-rated health of older adults aged 65 years and over (B = 0.22) compared to that of older adults aged 50-64 years (B=0.09). Conversely, saying that health problems had an impact on health (as opposed to not) was more strongly associated with poor self-rated health among those aged 50-64 years compared to those aged 65 years and older plus. The only difference noted was with marital status (having a partner) which was not significant among the 50-64 years but was associated with better self-rated health in older adults aged 65 years and over.

5.5.2.6. Health services use and self-rated health

Due to the smaller sample size of those who accessed health services (either doctor and/or nurse) throughout the year it was impossible to run multivariable analyses to compare access versus non access to health services. The findings showed that for those who accessed health services, the same associations between predictors and self-rated health found in the general population remained significant. In addition poor quality of healthcare in the community was associated with poorer self-rated health.

5.6. Discussion

The main purpose of this study was to determine whether or not minority status was one of the health determinants of self-rated health among Official Language Minority older adults in Canada. Although descriptive analyses of Official Language Minority older adults indicated that they rated their health more poorly compared to the general population, this trend was not confirmed in multivariable analyses and no association between Official Language Minority status and self-rated health was found. In the 2007 CCHS, Official Language Minorities

represent only 6% of the total sample and as such, may not have generated enough statistical power for meaningful multivariable analyses. Therefore it is likely that the lack of association could be attributed to the low sample size of the OLM population in the total sample. A sample of at least 10% would have been required to produce robust statistics.

The difficulty outlined above pertaining to the under-sampling of Official Language Minorities within large surveys such as the CCHS may warrant alternative approaches to looking at the behaviour of variables. As a result, the SVOLM was compared to the CCHS to look at the impact of Official Language Minority status on self-rated health. Unlike what happens when two or more surveys are combined for analytical purposes, the goal here was simply to identify variables that were identical in both surveys, similarly defined, and to compare the findings for general observations with regards to variable behaviours. The following requirements were met: same populations, same variables, same survey administration, and same survey design.[192] With regards to same populations, the SVOLM which focused on Official Language Minorities was a subpopulation of the general Canadian population, the focus of the CCHS survey. The two surveys took place within the same twelve month period. It can reasonably be assumed that the two populations were similar. The survey questions, as well as response categories, were compared and matched in both surveys. The two surveys were of the same survey design and same administration as both are Statistics Canada nationwide surveys. In addition, the same analytical approach was used for both surveys.

When the variables of interest were placed side by side for broad comparison purposes, no significant differences were observed except for the strength of the association. Health

services variables had a stronger association with self-rated health among Official Language Minority older adults whereas income had a stronger association with the self-rated health of the general population of older adults. This approach was not conclusive in helping gain insights into a possible association between Official Language Minority status and self-rated health. At best, it helped confirm that the determinants of self-rated health may be similar between Official Language Minority older adults and the general Canadian population of older adults and pointed to the extent or strength of such associations as where the differences may be found.

Even though there was no association between OLM status and self-rated health, an association was found between speakers of languages other than English and French (allophones) and poor self-rated health. It is to be noted that in the descriptive analyses, allophone older adult minorities who represented 18% of the total sample rated their health more poorly than both the minorities of official languages and the general population. In addition, when both groups of minority older adults (allophone and official language) were combined into a new variable called linguistic minority status, this new variable was found to be associated with poor self-rated health. This may indicate a possible association between OLM status and self-rated health and exposes two difficulties that have hindered research amongst minority communities, especially Official Language Minorities in Canada: low population size, especially for Francophones outside of Quebec, as noted above, and lack of valid linguistic variables in surveys.[193]

Surveys' sampling methods generally reflect the actual proportions of various groups of interest present in the population. However, this sampling strategy has not been effective in fostering studies among minority communities, especially Official Language Minority

Communities. Researchers have often resorted to alternative strategies to increase the sample size of minority populations such as merging survey cycles. It is common for researchers to combine data from multiple surveys when dealing with under-sampled populations.[194] By merging the CCHS 2001 cycle 1.1 and the 2003 cycle 2.1, Bouchard and colleagues were able to find an association between Francophone minority status and poor self-rated health.[193] However, as Statistics Canada warns about merging CCHS surveys, if the population changes significantly, samples from two or more cycles may not be treated as coming from the same population.[195]

Oversampling minority population has also been used as an effective way to address issues of statistical analyses pertaining to under-sampled populations in surveys.[196] Oversampling is used to increase the sample size of small sub-populations to obtain enough data to run the appropriate analyses. Statistics Canada as well as other national survey organizations have used this strategy to boost the sample size of sub-populations within surveys, of significant research interest for particular groups or local governments.[197,198,199] One concern with oversampling is that it may distort the reality and findings may not be generalizable. Adequate weighting can help mitigate the impact of oversampling.

Clearly, this study has several limitations. The cross-sectional design of this kind of surveys gives only a snapshot of a point in time and associations that are established cannot be ascertained in terms of causality. Many variables in the CCHS had a high number of missing cases and could not therefore be used. Our comparison of the SVOLM and the CCHS was limited by the low number of common variables. Even some variables which appeared to be the same were defined differently from one survey to another hence, hindering their usefulness for comparison purposes. One such variable was the *sense of belonging to the community* defined

differently in both surveys. In the SVOLM, it was belonging to a particular community (Francophone or Anglophone). In the CCHS, it was the strength of the sense of belonging to the community. With a low R-square value of 0.32 the multiple linear regression model was able to explain only 32% of the variation in the outcome variable *self-rated health*. Although this may seem low, it is adequate given that direct health-related variables such as diseases or health conditions, were not captured in the survey. Contrary to the expectation that continuous variables would be generally used in multiple linear regression, only categorical variables were used because of the nature of the data. Multinomial logistic regression was considered but could not be used due to the unusually high number of small cells of many variables. The exclusive use of categorical variables in a multiple linear regression model might explain the low R-square observed and might have impacted the magnitude of the linear correlation between variables. As Blankmeyer points out, when breakdown points for categorical variables recoded as binary or dummy variables are not adequately chosen, there is a high likelihood of introducing bias or outliers.[136] Every effort was made in this study to prevent such a bias as breakdown points of variables to be categorized were carefully assessed before being selected. It should be noted that all the key assumptions of multiple linear regression were met even with a model with predictors that were all categorical variables. The low representativity (6%) of Official Language Minorities in the sample presented a significant challenge that was overcome only in combining them with allophone minorities. However, this prevented a clear assessment of the relationship between Official Language Minority status and self-rated health among older adults in Canada.

5.7. Conclusion

This study confirms findings from other studies that minority status is associated with poor self-rated health but multivariable analyses fail to show an association between Official Language Minority status and self-rated health among older adults in Canada. However, it demonstrates that allophone minority status is associated with poor self-rated health, an association that was maintained when allophone and Official Language Minority were combined into a new variable called linguistic minority status, thereby suggesting a possible association between Official Language Minority status and self-rated health. Consideration of the determinants of self-rated health among Canadian older adults also showed that in addition to minority status, language, culture, and access to health services affect self-rated health. The descriptive analyses of this study confirm the findings of other studies that show that people in a minority situation have a poorer self-rated health than the majority population but multivariable analyses did not demonstrate such an association at the Official Language Minority status level.

Note liaising article II and III

As part of the quantitative component of this research the previous two papers presented findings from statistical analyses that helped assess and understand the determinants of self-rated health among OLM older adults and how these minorities in turn compared with their counterparts in the general Canadian population. The next paper entitled "Lost in Policy Translation: Canadian Minority Francophone Older Adults and Health Disparities" is a position paper based on a reflection on the quantitative findings and on Minority Francophone community members' feedback related to those findings. In the next paper, we examined access to health services in French by minority Francophones in light of the Canadian policy environment, and investigated the role of linguistic policies in furthering and reducing health disparities negatively affecting OLMCs using the WHO's Social Determinants of Health Framework for Action and Rossell's Framework of Criteria for Evaluating Public Policies.

6. Article III: Lost in Policy Translation: Canadian Minority Francophone Older Adults and Health Disparities

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6.1. Executive Summary

Research across the globe show that people from minority communities tend to be in poorer health than the general population. A 2008 World Health Organization report on the Social Determinants of Health stressed that the high burden of disease and disability around the world is due to a great extent, to poor and unequal living conditions which are the consequence of deeper structural conditions such as poor social policies and programmes, inequitable economic structures, and deficient politics.

Francophones living outside Quebec and Anglophones in Quebec form the two Official Language Minority Communities in Canada. Together both minorities account for just over two million people. In order to better describe and understand the situation of Official Language Minorities (OLMCs), especially of Minority Francophone older adults living outside of Quebec, two national surveys were used followed by Francophone community members' feedback on the findings.

This study showed that minority Francophone older adults consistently rated their health more poorly than their counterparts in the general population. In addition, the sense of belonging to, and vitality of minority community were associated with better self-rated health for minority Francophone older adults while high concentration of minority group was associated with poorer self-rated health. What is not known from this study, is the extent to which older adults' Official Language Minority status alone is associated to self-rated health. However, subsequent feedback from Francophone community members emphasized the role of assimilation and structural inequities as contributing significantly to health disparities and to the low vitality of their communities.

These systemic and structural inequities that lead to assimilation and health disparities have their roots in unfavourable policies and policy environments that often take a hands-off approach, and enable a survival-of-the-fittest attitude where Official Language Minority Communities (OLMCs) are further subjugated and assimilated. The complexity of Canada's healthcare system(s) and the non-alignment of federal and provincial/territorial responsibilities with regards to healthcare funding and provision of services, further exacerbates inequities and health disparities. These challenges have had significant and negative ramifications on the one hand, on the collective and individual psyche of OLMC members, especially minority

Francophone older adults, and on the other hand, on their vitality, health and well-being, as well as on the Canadian society as a whole.

Ironically, just as inadequate and inequitable policies further inequities and health disparities, good and equitable policies reduce disparities, bring about a greater sense of health and well-being, and boost community vitality. This shows how policies can be used to address the health disparities that disproportionately and negatively affect minority Francophones in Canada with the following potential benefits: increased vitality of Official Language Minority Communities, greater sense of belonging, greater Francophone migration to minority Francophone communities, decrease in and judicious use of health services, and increased participation of the minority Francophone population in the life of the greater community.

Recent and current efforts by the federal, provincial, as well as territorial governments are steps in the right direction but need to be more aggressive and concerted in addressing social inequities and health disparities. Provinces such as Saskatchewan, Alberta, British Columbia, and Newfoundland and Labrador need to move away from policies that adopt a hands-off approach to more hands-on policies that maximize services for their minority Francophone populations, close the disparity gap, and improve their health. This will not only benefit these populations, but the majority Anglophone population as well, as health benefits, cultural, social and economic vitality not only reduce the burden on society as a whole, but lead to social cohesion and ultimately to better health and well-being for the entire Canadian population.

6.2. Introduction: Minority Status and Health

Research across the globe show that people from minority communities tend to be in poorer health than the general population.[146] More specifically, they experience greater morbidity

and mortality, have higher levels of disability and hospital admission, poorer levels of quality of life, and a shorter life expectancy than the general population.[147,150,159,167,170,200] These health inequities exist in many countries including the richest countries in the world.[201] In 2008, a report from the World Health Organization (WHO) on the social determinants of health demonstrated that most health disparities are rooted in inequitable social structures and policies that perpetuate them. It also stressed that the high burden of disease and disability around the world is due to a great extent, to poor and unequal living conditions which are the consequence of deeper structural conditions such as poor social policies and programmes, inequitable economic structures, and deficient politics. Unlike differences that are determined by biology, these inequities are preventable and amenable to change. Key areas and principles of action include improving the conditions of daily life such as the circumstances in which people are born, grow, live, work, and age, addressing the inequitable distribution of power, money, and resources, and working towards deepening our understanding of, and raising public awareness about the social determinants of health.[202] In 2011, the Rio Political Declaration on the Social Determinants of Health (SDH) reiterated the importance of addressing these systematic gaps, and called on governments and institutions to act to redress such inequities.[203]

In relation to income inequality, individual status in society may also contribute to systemic health inequities. For example, in Canada many challenges arise from having two official languages and a large inflow of immigrants contributing 20% of its population born outside the country.[204] Immigrants tend to be healthier than the general population when they first arrive, reflecting the healthy immigrant effect, which results from the medical screening examination during the immigration process.[205,206] However, over time, convergence factors including change in diet, language barriers, lack of access to health services, unemployment,

isolation, and stress, among other factors, lead to a decline in health status.[207] In addition, First Nation, Métis, Inuit, and other Aboriginal people in Canada suffer disproportionately higher rates of suicide, injury, substance abuse, infectious and chronic diseases and have a life expectancy that is seven years shorter than that of the general population.[174,176,208]

Until recently, the health status of official language communities living in a minority situation was largely unknown or ignored. Recent surveys by Statistics Canada led to preliminary work on the social determinants of health of Official Language Minority Communities guided by the following models.[63] The World Health Organization (WHO)'s CSDH Framework for Action (Figure 2.5) integrates issues of governance, macroeconomic, social and public policies as "structural determinants of health inequities". Rossell further proposes a framework for evaluating public policies (Figure 2.6).[60] Therefore the purpose of this paper is to summarize key findings in light of these models to illustrate to what extent some public policies may have contributed to health inequities for Official Language Minorities in Canada and might also intrinsically be part of the solution as well. More specifically, this paper argues that equity-based constitutional, legislative, and government policies in regards to official languages and comprehensive strategies to achieve this equity-based approach, ought to play a determining role for the health and vitality of these minorities. As a result, this paper argues the need for interventionist government policies to deal with health inequities affecting OLM minorities in general, and minority Francophone older adults in particular. Minority Anglophones in Quebec have one government with one set of policies and are mostly concentrated in the greater Montreal area; in contrast, minority Francophones share a much more complex reality as they are scattered in nine provinces and three territories under their respective governments with different or unique policies, and policy regimes. The contrast in social and political reality between the Anglophone

minority in Quebec and that of Francophones outside Quebec led us to focus on the latter and more specifically on the older Francophone adults.

The structure of this paper is guided by the WHO CSDH framework for action that shows from a conceptual perspective, a move from the determinants of health to the broader structural determinants of health inequities, and ultimately to where action is needed to improve health and reduce inequities affecting minority Francophones. As a result, we start this paper by exploring the context of the minority Francophone population, by highlighting to what extent research evidence qualifies the disparity, and by presenting the Francophone community members' feedback on the findings. We then investigate some of the root causes of the inequities affecting them primarily at the policy and healthcare levels and explore the overall impact of these inequities in making minority Francophones a second-class society. We finally emphasize that it is in the interest of the Canadian society in general to have a strong Official Language Minority Community, and we identify where action needs to be taken in addressing health inequities negatively affecting minority Francophone older adults.

6.3. The minority Francophone population: Context and brief description

Francophones living outside Quebec and Anglophones in Quebec form the two Official Language Minority Communities in Canada. Together both minorities account for just over two million people.[29] In contrast to one million minority Anglophones who live in the province of Quebec, the million minority Francophone population is older, has lower literacy and education levels than the general Canadian population, and, in addition, is scattered across Canada in the remaining nine provinces and three territories. This high and uneven dispersion for a relatively small population compared to the size of the country, poses a significant challenge as

Francophones outside Quebec represent just over 3% of the total Canadian population. In addition, this dispersion is very uneven since Francophones account for nearly 32% of the New Brunswick population but between two and four percent for all other provinces and territories with the exception of Newfoundland and Nunavut where they fall lower than two percent.[209] Their minority status is further exacerbated by a very uneven access to services, especially health services, in their first official language regardless of geography. It is well known that living in rural and remote places represents a challenge in itself for any population. The linguistic barrier constitutes an additional disadvantage for these dispersed Official Language Minority Communities.

In order to better describe and understand the situation of Official Language Minorities, Statistics Canada with some key partners launched in 2006/2007 a Post-Census Survey (SVOLM) designed to assess the vitality of these communities on a number of dimensions.[63] The health section of the 36-module questionnaire asked questions in the following key areas: self-rated health, importance of being served in one's own language, and access to and utilization of health services in the minority language including physician, nurse, telephone health line, and hospital/clinics/health centre services. In addition, every two years, Statistics Canada collects nationwide data on self-reported health and diseases, lifestyle and social conditions, as well as prevention and detection of disease through the Canadian Community Health Survey (CCHS).[210] Both sources, the 2006 Post-Census Survey on the Vitality of Official Language Minorities (SVOLM) and the 2007 Canadian Community Health Survey (CCHS) cycle 4.1 served to generate information with regards to Official Language Minorities.

First the health determinants of official language older adults' (50-80 years), who live in a minority situation were identified and compared to those living as a majority in the general

Canadian population as reported in a previous publication.[191] Descriptive and multivariable analyzes were conducted using SPSS 19 and SUDAAN. The outcome variable "self-rated health", was defined by respondents as either excellent, very good, good, fair, or poor. Determinants included the following: importance of services in the minority language, use of doctor/nurse services, sense of belonging to the minority community, social support, literacy level, vitality of minority community, physical activity, community visibility, concentration of minority community, number of hours spent watching television, (level of sedentarity), impact of health problems, age, sex, income, education, marital status, employment status, rural/urban setting, and geographic location (province of residence). The following section highlights the main results.

6.4. Disparities affect minority Francophone older adults

Based on the analysis of the CCHS, 19.6% of Official Language Minority older adults rated their health as fair to poor compared to 16.2% of the general population of older adults in Canada. When comparing both official language older adults in minority situation with data from the SVOLM, 22.6% of Francophone older adults outside of Quebec evaluated their health as fair to poor while only 15.9% of Anglophone older adults in Quebec gave a similar rating. It is noteworthy that the gap between the population of minority Francophone older adults and the general population, increases significantly with age.

Multivariable analyses showed that self-rated health was associated with determinants such as education, income, social support in older adults from both Official Language Minorities as well as in the Canadian general population of older adults. In the SVOLM data sense of

belonging to the Francophone minority community, vitality, and concentration of minority community were found to be associated with self-rated health.

Sense of belonging to the Francophone community and vitality of minority community were each associated with better self-rated health. Surprisingly, descriptive analyses revealed that identification with one's community varied considerably with only 35% of minority Francophone older adults affirming that they belonged to the Francophone community while 50% identified with both Francophone and Anglophone groups and 14% uniquely with the Anglophone community. For minority Anglophone older adults in Quebec, the sense of belonging to the Anglophone community was much stronger at 48%, belonging to both groups at 41%, and uniquely to the Francophone community at 9%. Minority Anglophone older adults in Quebec seem to show a stronger sense of belonging to their linguistic community than their Francophone counterparts in the rest of Canada. Both OLMCs felt similarly about the vitality of their communities, as 54% of Francophones outside of Quebec compared to 55% for Anglophones in Quebec rated the vitality of their respective communities as weak.

High (as opposed to weak) concentration of minority community was associated with poorer self-rated health. According to Statistics Canada the "Index of Concentration (IC)"is defined as both a relative and an absolute measure of the minority population compared to the majority population in a given area. A score close to 0.0 indicates high dispersion and weak concentration whereas scores closer to 1.0 indicate high concentration. In the SVOLM, this index takes account of both the proportion and the absolute number of the official-language minority within a dissemination area.[184] As a result, a high concentration of minority Francophones, as measured by a strong IC score between 0.50 and 1 in this study, means that either they account for at least 50% of the overall population in that area, or their number is equal to or greater than

200 persons. Similarly, a medium concentration refers to either a proportion raging between 10% and 50% or an actual population equal to or more than 50 but less than 200 whereas a low concentration is either a proportion of less than 10% or a population of less than 50 people. Because of the small sample size of the OLMCs in this study, the medium and low categories were collapsed into a "weak concentration index" ranging from 0 to 0.50. Descriptive findings from the SVOLM virtually showed no difference as 18.9% of those living in weak concentration areas rated their health as poor compared to 19.7% for older adults living in areas with high concentration.

The fact that Francophone communities outside of Quebec are scattered, in addition to their relatively small number and proportion, has had a negative impact on their health and their access to health services. Minority Francophones tend to move from areas of low concentration (rural communities) to areas of higher concentration (urban centres) as they age and become in greater need of health services. This trend may explain why high concentration of minority Francophone community was associated with poorer self-rated health. In the general population, even though the same rural to urban migration takes place, and often for health reasons as well, population density which is an equivalent variable to concentration of minority community, is associated with better self-rated health as people living in rural and remote communities are in significantly poorer health than those living in urban centres.[211]

When assessing the importance of receiving health services in the minority language, 81% of Official Language Minority older adults in Quebec thought it was important, versus 54% of the Official Language Minority of older adults outside of Quebec. Interestingly, the importance of receiving health services in the minority language was only associated with Anglophone Quebecers' self-rated health, but not Francophones' outside of Quebec.

Historically, in the West, the initially strong and growing Francophone presence was significantly diminished by policies favouring the settlement of non-French speaking immigrants from Europe and mostly from Great Britain.[212] In Saskatchewan for example, Statistics Canada indicates that the Francophone population fell from 36,815 people in 1951 to 16,790 in 2006, a drop of more than 50% in 55 years.[70] At the same time, the majority Anglophone population grew from 62% in 1951 to about 86% in 2006. During the same time period, Saskatchewan allophones saw a similar drop of more than 60%. This demographic downturn was in part the result of a long lasting situation where Francophone immigration was discouraged. Even though fertility rates saw a steep decline after the 1960s and contributed to some extent to the decline of minority Francophone populations, there is evidence that inequitable immigration policies limited Francophone immigration thereby stalling their growth and keeping those communities small.[213] This is an example of how structural inequities have had a lasting impact not only on Francophone minorities, but on their behaviour as well, as they chose to identify less and less with their minority community and more and more with the dominant Anglophone community. Assimilation as it turns out, is the consequence of deeper structural issues embedded in policies across English Canada, and which over time, erode the sense of belonging of Francophones to their communities, and which further weakens their vitality. These structural issues point to the need for a more careful consideration of their effects on minorities' health.

6.5. A tale of the equity of two official languages and the down-to-earth disparity experiences

The findings of this research were presented to Francophone minority community members, primarily those in Saskatchewan, at three conferences and one workshop. Their feedback and insights from discussion sessions were recorded for further analysis conducted by identifying key themes, grouping them, and exploring them in light of the existing French-language services policies. The Francophone community in Saskatchewan was chosen as a convenience sample since they were readily available. But more importantly, it so happened that they are also one of the most at-risk OLMCs due to their extreme minority status (less than 2% of the provincial population). They shared a deep sense of disenfranchisement. They all felt that both the low sense of belonging and the low importance attached to receiving services in the minority language had a lot to do with the long history of French language and culture repression, and forced assimilation of OLMCs. Many thought that the current government policies were doing little to enhance access to services in French for the Fransaskois community. Similar reactions and examples were observed when these results were shared at a national conference in Ottawa

For years, Official Language Minority organizations have been advocating a comprehensive government policy to address various disparities and inequities in a concerted manner including access to health services as a key area of concern. The official rhetoric is forever repeated in a number of key documents. For example, in its recent position paper entitled “Roadmap for Canada's Official Languages 2013-2018: Education, Immigration, Communities”, the Canadian government re-affirms that:

> *"Canada's two official languages are part of our history and our national identity. They help define who we are as Canadians. They offer enormous economic, social and cultural opportunities and have helped to establish Canada's strong place in the world. Our two official languages enhance Canada's competitive advantage, both domestically and internationally, and have contributed to Canada becoming a strong, open society, able to attract people from different cultures around the world."*[29]

At the provincial level, contributions of minority Francophone communities are also acknowledged.[75] The Saskatchewan French-language Services Policy states in its introduction the following:

> *"Francophones are an important component of the province's linguistic duality and play an active role in Saskatchewan's economic, cultural and social development. In agriculture, business, the service sector and in many other parts of the Saskatchewan economy, the Fransaskois have shown and continue to show a great sense of leadership and initiative which contributes to the economic vitality of Saskatchewan."*[214]

In other words, Canada's rich history, its identity, and its prosperity have been significantly strengthened by its two official language communities. Both have equal formal recognition to their heritage, and to their current and future contributions as enshrined in the Charter of Rights and Freedoms and the Official Languages Act.[27,28] Therefore, citizens of both official languages in a minority context should reasonably expect the same level and quality of service as acknowledged increasingly in provincial and territorial French language services policies.[215,216]

6.6. Uncovering some of the root causes of inequities facing Francophone minorities:

6.6.1. The policy conundrum

The principle of equal access to and quality of health services for OLM communities across Canada may be easy to affirm but much more difficult to attain. Unfortunately great differences and disparities still exist on the ground despite the Official Languages Act and the Charter of Rights and Freedoms. According to the WHO framework, the structural environment of a society such as the socio-economic and political contexts and the governing policies influence the well-being of all citizens. Clearly Francophones outside of Quebec have found themselves at the shorter end of power imbalance in a majority Anglophone context. Their struggles such as the Montfort hospital in Ontario with regards to access to health services in French, and the numerous judicial battles in virtually every province and territory in English Canada to assert their education rights under the Charter, illustrate an environment that has rarely been receptive to the needs of minority Francophone Canadians.[217] This historical context has an impact on their vitality, their sense of belonging to their minority community, on their well-being, and on their health.

In order to help distinguish the relative impact of provincial/territorial policies on the well-being of Francophone in minority situation in Canada, a guiding analytical tool was used. Rossell's policy analysis framework is a matrix with two poles: the Policy Content and the Policy Formulation Characteristics (Figure 2.6). Policy Content focuses mainly on the values which are to guide and to justify a policy initiative, which in turn is articulated in terms of policy alternatives usually based on the criteria of equity, efficiency and effectiveness. Choice of *compliance characteristics* refers to the strategies that are adopted to ensure or encourage policy implementation. These strategies focus on whether policies are achieved through a hands-off,

largely market driven, incentives approach or through direct government control. Policy *formulation characteristics* describe a continuum of ways a government proposes to intervene in a policy area either, at one extreme, by a step by step incremental approach or, at the other end, through a comprehensive approach. This is similar to another classification of these provincial and territorial policies into three types: broad-based language policies, sector-based language policies, or policies of non-intervention.[61]

Given the focus of this study on whether or not government policies in Canada positively impact the health of Francophone minorities, Rossell's model was adapted to include health impact as a policy evaluation criterion in addition to equity, efficiency, effectiveness, and political feasibility as seen in table 6.1 below.[60] First a brief historical reminder! Under the Canadian Constitution (1982), Quebec and New Brunswick are constitutionally bilingual. Under the 1980 and 1985 Constitutional Reference to the Supreme Court, Manitoba is also constitutionally bilingual since its incorporation into Canada in 1870, but has been delivering bilingual services only since it was ordered to do so by Supreme Court decisions in 1979 and 1985. Ontario has never attained that stage but has provided a legislative basis to its services in French through its French Services act (1990). All other provinces have adopted policies which don't have any legislative or constitutional basis and are subject to the good will of their respective cabinets.[75,217] As a result, every province and territory except British Columbia and Newfoundland and Labrador, now has at a minimum a French language policy that sets parameters for offering French services to the Francophone minority population. Applying Rossell's framework, provincial and territorial French-language services policies were evaluated on the basis of the above mentioned criteria as seen in table 6.1 below.

Table 6.1: Evaluation of Provincial and Territorial French-language services policies

Provinces & Territories	Evaluation Criteria (Adapted from Rossell)						
	Equity	Efficiency	Effectiveness	Political feasibility	Hands-on approach	Compre hensive	Health impact
NB	+	+	+	+	+	+	+
Quebec	+	+	+/-	+/-	+	+	+
Manitoba	+	-	+	+/-	+/-	+	+
Ontario	+	+	+/-	+/-	+/-	+/-	+
NS	+	+	-	-	+/-	-	+/-
P.E.I	+	+	-	-	+/-	-	+/-
SK	+	-	-	-	-	-	+/-
Alberta	+	-	-	-	-	-	+/-
BC	-	-	-	-	-	-	-
Nfld & Lb	-	-	-	-	-	-	-
Yukon	+	-	+	+	+	-	+
Nunavut	+	-	+	+	+	-	+
NWT	+	-	+	+	+	-	+

In the past twenty years, federal, provincial and territorial governments have become more engaged in enhancing the vitality of minority Francophones. In general, an incremental approach has been adopted at the policy level as well as at the practical level to improve access to health services. The federal government's roadmaps have been well received and made some steps in the right direction in enhancing the vitality of Official Language Minorities. At the provincial and territorial levels, health services policies have been crafted, adopted, and are being implemented with various degrees of success. It should be noted, as seen in table 6.1, that all provinces and territories outside of Quebec currently have a French language services policy or

legislation with the exception of British Columbia and Newfoundland and Labrador.[23] In general, these health services policies or legislations seek to enhance access to health services for minority Francophones within provincial governments' areas of jurisdiction and influence. They do not generally extend beyond government services and civil servants to the larger society. However, some provinces such as New Brunswick, Ontario and Manitoba have courageously and successfully extended the reach of their French services legislations to reach quasi-government institutions such as health regions. Such an approach has increased considerably their ability to directly enhance the health of their minority Francophone populations.[75]

For example, a 2012 report published by the Manitoba Centre for Health Policy shows how in Manitoba there is a generational effect due to policy efforts by the provincial government to empower Franco-Manitobans and facilitate access to (health) services in French[218]. Similar efforts have been seen in Ontario with Franco-Ontarians gaining increasing access to health services in French, and enjoying a level of legal protection only surpassed in minority Francophone Canada by New Brunswick and Manitoba, whose policies are more effective, and more comprehensive in addressing inequities as seen in table 6.1. The larger proportion of Francophones in New Brunswick, evaluated at 32% of the provincial population, has led to better health for New Brunswick minority Francophones. Even though Saskatchewan has recently undertaken laudable efforts with regards to empowering the Fransaskois community, the current Saskatchewan French Language Services Policy regarding provision of education and health services in French lags behind those of Ontario, New Brunswick, and Manitoba as seen in table 6.1.

The current provincial French Language services policy is very limited in its scope hence, is not as effective as it could be, and does not seem so far to have led to better health, as minority

Francophone older adults continue to rate their health more poorly than the majority Anglophone population. The non-binding nature of the evaluation of the current French Language Services Policy in Saskatchewan provides few mechanism for accountability. Moreover, political bias towards efficiency as opposed to equity has often meant not offering services in French because it is costly, thereby further increasing inequities between the majority population and minority Francophones in the province. It is not surprising that given the numerous challenges the Fransaskois community faces, various succeeding governments have formulated policies which according to Rossell's framework, are incremental in nature rather than rational-comprehensive as seen in New Brunswick and Ontario for example. Saskatchewan along with Alberta, British Columbia, and Newfoundland and Labrador, are among the provinces with the lowest proportion of Francophones at 2% or less.[219] Interestingly, these are the only provinces with linguistic policies of non-intervention which, as has been suggested, work for the benefit of the majority Anglophone population or do little for the minority Francophone population.[61]

6.6.2. The health care conundrum

The complexity of Canada's legal, health and healthcare systems raises another barrier to overcome for minority Francophones in accessing services in French. In a province such as Saskatchewan, any improvement in offering services in French can be attributed to a large extent to its Fransaskois population winning judicial battles in court.[61] Even though in recent years the provincial government has been more proactive in facilitating access to services in French and in enhancing the vitality of the Fransaskois community, much work is still needed. With regards to healthcare services, the federal government funds healthcare through taxpayers' dollars and resources provided by all Canadians but it is the responsibility of provincial governments to

administer those funds and provide healthcare services to its population. This, in practice, is done by regional health authorities who are entities of their own as quasi-government institutions.

In Saskatchewan for example, the Saskatchewan Government French Services Policy does not apply to the thirteen health regions hence, leaving the major providers of health services to craft their own French language services policies. This means that thirteen Regional Health Authorities must each prepare their own language policy resulting potentially in 13 distinct and possibly contradictory health services policies in the province. This alone, creates a significant issue for the Fransaskois population and further enhances health inequities. In British Columbia just as in Saskatchewan, none of the health regions has a French language services policy, which presents a significant barrier for Francophone British Columbians in accessing health services in French. A streamlined approach that consistently and broadly provides the same quality of health services in French across each province is needed to significantly reduce the barriers faced by the minority Francophone populations in Canada.

It is not enough to provide services even if those services are of the same standard and quality as those of the majority language. Francophone minority communities have developed the notion of "active offer" (*offre active*) to describe the responsibility of governments to actively reach out to minority communities in order to promote and enhance provincial services in the minority language. By adopting this principle of active offer in their French language services policies, governments at various levels, federal, provincial, or territorial, are recognizing more and more that it is not enough to provide services in French to Francophone minorities.[28,216,220] Those services need to be actively publicized and the minority Francophone population made aware of, encouraged and empowered to access those services. However, at the same time, the non-interventionist nature of provincial and territorial policies has handicapped their ability to

lead to a greater active offer approach. It may seem that a hands-off approach, which is in essence one of the key characteristics of policies of non-intervention, and to some extent concerns broad-based policies as well, is in contradiction with an active offer approach of policy implementation. Active offer appears more congruent with a command-and-control approach with direct government involvement and regulation especially, when the policy affects minority populations. A hands-off approach, albeit with incentives as identified in Rossell's policy framework, may work well in other policy areas, but not necessarily when the interest of minority populations is at stake. A direct government involvement and oversight is needed to ensure that policies are crafted and adhered to that reflect and respond to the needs of the minority Francophone populations.

6.6.3. A second-class society

In a context with a long history of assimilation where minority Francophones were often prevented by inequitable policies from speaking or studying in French, as was the case with Regulation 17 of 1912 in Ontario and the restrictive education legislation in other provinces, there is often a reluctance on the part of minority Francophones to shift away from functioning primarily in English.[221,222,223] This is due to a number of factors including a concern that the quality and availability of services offered in French do not reach the standard of the same services in English. It is also sometimes due to a sense of guilt and embarrassment about spending tax payers' dollars on services that they could access in English. This sense of guilt, self-denial and self-forsakenness, perhaps even low-self-esteem, experienced mostly by Francophone older adults, as seen in their low sense of belonging to the Francophone community, can be thwarted by the government actively empowering these minority populations

to lay claim to their rights and receive services in French, their language as one of Canada's two official languages.

Limited access to health services in French often result from the lack of well-targeted and coordinated policies between the federal and provincial or territorial governments. In addition, the weakness of these policies in their effectiveness and in fostering equity continues to prevent equitable access to services for Francophone minorities. This weakness in policy effectiveness is due in part to governments pursuing a hands-off approach to politics that favour political expediency and re-election rather than equity. It can be argued that that policy incoherence between the federal and provincial/territorial governments in addition to a hands-off approach to politics negatively affect minority Francophone older adults. It limits their vitality, continues to foster a culture of assimilation that erodes their sense of belonging to the minority community, perpetuates inadequate access to services in general and to health services in particular, and as a result, has a negative impact on their health.

6.7. Ultimately, a neglected Official Language Minority means a weaker Canadian population

The lack of consistent, effective, and equitable approaches to policies addressing the health needs of minority Francophones has not only direct and significant impact on their vitality, well-being, and health, but, in addition, this has ramifications on the general Canadian population and leads to an avoidable burden on the Canadian society as a whole. As seen in the WHO's SDH Conceptual Framework, social cohesion is affected by the social determinants of health inequities. An unhealthy minority population has a significant impact on the general population. Strong social cohesion leads to a greater sense of well-being. According to this framework, and

since social cohesion is a value held high by Canadian society, addressing social inequities and reducing health disparities is essential, and has an effect on the health and well-being of Canadians as a whole.[224,225] If nothing is done, a greater health burden, a weakening of Canada's social cohesion as well as its social, cultural and linguistic diversity, a decrease in vitality of Francophone minority communities, as well as an economic burden on society as a whole can be expected.

With the Francophone population outside of Quebec being on average older than the Anglophone minority population, not attending to their needs leads to a potentially greater burden on the healthcare system due to poorer health in old age. This research found that, within the older adult population among minority Francophones, 17.4% of those aged 50-64 years versus 30.3% for those aged 65 years and over reported a self-rated health of fair to poor. In the general population of older adult, the gap between the two age groups was much narrower at 14.8% for the 50-64 and 21.6% for the 65 years and over. There seems to be a sharper decline in health from the younger to the older age group within the Francophone Minority population of older adults compared to the general population of the same age groups. This discrepancy has a negative impact of the vitality of the community and on the Canadian society as a whole given that the Minority Francophone community is on average older compared to the general population.

Weak vitality of minority Francophone communities has been shown to be associated with a weakening of their cultural and linguistic identity. Landry and Allard posited that the weaker the vitality of the minority Francophone communities, the more assimilated they are to the majority Anglophone population.[9] Furthermore, vitality can be seen as being closely tied to the Francophone minority community retaining its distinct and autonomous identity in relation to

the majority Anglophone population.[226] It is also established that demographic capital which includes factors such as population numbers, aging, fertility, population density and movement, and language continuity, are significant components of community vitality.[9] With the minority Francophone population scattered in low-density communities across the country, a further decrease in population numbers and other demographic capital indicators directly negatively affect its vitality and survival.

6.8. Addressing health inequities among Canadian minority Francophone older adults

Studies on social determinants of health usually focus on health disparities arising from the often avoidable gap that exists between people, groups, communities, or nations, which have a negative impact on the health of populations.[227] These health disparities disproportionately affect minority groups negatively, and are often related to long-standing economic, political, geographic, and social disparities.[182,183] For Francophones in a minority context, examples of systemic social inequities include the lack of, or poor access to education, health and justice services in French. Such inequities arise from the systemic scarcity of minority Francophone professionals in these fields, from economic disparities, and from government inaction or action contrary to the minority Francophones' interests and needs such as policies limiting or banishing French schools/education boards.[75,222,228,229,230] This is illustrated by the complaints-driven approach by provincial (and territorial) governments to dealing with social inequities, as has been the case historically in Canada's Western provinces.[231] Such a hands-off approach only further perpetuates social inequities and health disparities affecting minorities. Over time these become

an expected reality that often goes unnoticed, unacknowledged, or in many cases, normalized even though such an approach hurts not only minority communities, but society as a whole.[232]

Government efforts towards improving the vitality and health of minority populations are often handicapped on the one hand by competing and conflicting viewpoints based on political efficiency and expediency rather than what is equitable, effective, and leads to better health. For example, a Fraser Institute study looking at the cost of having two official languages in Canada shockingly and erroneously suggested that Canada may have reached an equilibrium with regards to the demand and supply of services in French to Canadians.[233] This assumption of equilibrium, based mostly on financial and market-driven considerations, does not account for non-financial aspects such as the contribution of Francophones to the social, linguistic, cultural, and even economic capital of the country. On the other hand, unlike in Quebec where linguistic data are systematically gathered, the lack of systematic and standardized data on language in most other provincial (and territorial) databases and surveys leads to partial or unreliable data, to ineffective policies, and to further increase disparities between Francophone minorities and the general population.[234]

Enhancing the vitality of minority Francophones goes beyond providing services in French and empowering them to use those services. It is working with these communities in the first place in order to identify the needs and in partnership with them, finding solutions and enacting them. It is giving a seat and a voice to minority Francophones in decision-making spheres affecting them so that their input can inform the actions of federal, provincial, and territorial governments, health regions, and other quasi-government institutions. Francophone health networks such as Société Santé en Français (SSF) have been instrumental across the country in working with federal and provincial governments to enhance the health of minority

Francophones. Closer partnership with similar institutions is needed to identify the needs and improve the breadth and quality of services offered. Following the WHO model *Toward unity for health*, this partnership with minority Francophone institutions not only enhances the vitality of their communities, but also enables a greater sense of belonging to those communities.[235]

6.9. Summary and Conclusion

We know from this study that on many levels and with regards to self-rated health, Official Language Minority older adults assessed their health less favourably than the Canadian general population of older adults. These disparities are even more marked between minority Francophone older adults and their counterparts in the general population with yet, another greater disparity between minority Francophone older adults aged 65 years and over and the general population of older adults of the same age group. These disparities are better addressed by social as well as health policy approaches that are based on the understanding that health disparities are rooted in social inequities that put minority populations at a disadvantage. In addition, there needs to be a greater policy coherence between federal and provincial/territorial governments and a clear focus on equitable access to services by these respective levels of government in order to help reduce the disparity gap that negatively affects minority Francophones.

Addressing the health disparities that disproportionately and negatively affect minority Francophones in Canada as shown in this study, has the potential to lead to the following benefits: increased vitality of Official Language Minority Communities, greater sense of belonging, greater Francophone migration to minority Francophone communities, decrease in

and judicious use of health services, and increased participation of the minority Francophone population in the life of the greater community.

As data gathering strategies and research continue to evolve in order to shed light on what we do not yet know, our current results are significant enough to warrant serious consideration and action, especially with regards to the improvement of existing policies. Further research in this area may investigate the actual contribution of specific provincial/territorial French-language services policies in furthering access to health services and in reducing health inequities.

7. Research, Community Stakeholders' Participation, and Policy Implications for OLMCs

7.1. General Discussion

7.1.1. Summary

This thesis aimed to identify, describe and characterize access to and use of health services in French by older adults in Canada outside the province of Quebec, determine the factors associated with the self-rated health of Francophone older adults in a minority situation, compare these factors with those of the Anglophone minority population in the province of Quebec, and compare self-rated health of older adults of official-language minority status with the general population of older adults. In addition, and in light of the aforementioned objectives, it sought to provide recommendations for improved access to health services in French by Francophone minority older adults based on community stakeholders' feedback and the policy environment.

As anticipated, objectives one and two showed that use of health services by OLM older adults was associated with poorer self-rated health. Among other findings, it was also found that strong vitality of, and strong sense of belonging to, the OLM community were associated with better self-rated health, whereas high concentration of minority community was associated with poorer self-rated health. Surprisingly, only 35% of Francophones expressed a sense of belonging to their minority community. This probably should be considered in relation to the 54% of them who felt important to receive services in French. This weak identity was expressed by minority Francophone community members as the result of structural factors such as assimilationist policies and linguistic oppression, leading over time to weak demand for services in French. This linguistic oppression is documented in a recent book by sociologist Alan Anderson who points

out the long history of systematic assimilation and mistreatment of Francophones in Saskatchewan.[236]

With regards to objective three, compared to the general population, minority Francophone older adults tended to rate their health more poorly. However, OLM status was not shown to be associated with self-rated health. This was postulated to be attributable to their low sample size in the CCHS's overall sample of Canadian older adults and Statistics Canada's analytical approaches. This result raised the issue of valid minority representation in large survey data. Despite this setback, the descriptive analyses, corroborated by other research that combined survey cycles to obtain sufficient power for successful statistical analyses, show that OLM older adults, and especially minority Francophone older adults evaluate their health at a lower level than the general Canadian population of older adults. Hence, in response to objective four about recommendations for improved access to health services in French for the minority older adults, a case was made for more comprehensive policies designed to reduce gaps and inequities between majority and minority official language populations that create negative health consequences as seen in chapter six above.

Since specific elements of discussion have already occurred in each of the respective articles above, only the following themes will be discussed in this section: inequities and health, the negative impact of insufficient data on OLM research, the impact of population size on policy, and the impact of policy regimes on OLMCs.

7.1.2. Inequities and health for OLMCs

Social inequities are disparities in wealth and power, rooted in systemic and structural conditions such as ineffective and discriminatory social policies, inequitable economic structures,

and deficient politics.[232] These lead to disparities in health as found in this research with minority Francophone older adults rating their health more poorly than the general population, and experiencing poor access to health services. Health disparities are partly mediated by disparities in access to health services.[237] This study corroborates findings from other studies that show that Francophones outside of Quebec face significant language barriers that negatively affect their access to health services.[238,239,240,241,242] Their poorer access to health services compared to the general Canadian population may be erroneously singlehandedly attributed to language barriers whereas language barriers simply reflect societal norms, attitudes, social and economic power, and policies defined by the dominant majority.[243] These in turn act in the causal processes that undergird social inequities and health disparities as seen in the WHO's CSDH Framework for Action.

As Baum expertly points out, health equity is brought about by using the technique of nut cracking which exerts a top down and bottom up pressure to crack the nut and dismantle health inequity.[244] Accordingly, a top down action involves political will and commitment while a bottom up action involves the participation of members the community and civil society groups. However, as has been pointed out, community involvement is dependent on the hierarchies of power and works well where there is political will on the part of those in power to engage and involve community members.[245] As a result, both public and institutional engagement, otherwise known as "linking social capital", is needed to achieve greater equity. Countries that are poor in linking social capital tend to have poor governance and greater social and health inequities. Social inequities are generally more prevalent in developing countries where the scarcity of financial resources, generally poor governance, and unequal power distribution leads to an overwhelmingly poor majority and an affluent minority, who are usually at the top of the power

structure. As a result, there are significant health disparities. One would not expect these social inequities to be present to the extent they currently are in an affluent country such as Canada.

Inequities in Canada have also disproportionately and negatively affected First Nation, Métis, Inuit, and other Aboriginal people. This has led to significant health disparities, as these groups suffer disproportionately from higher rates of suicide, injury, substance abuse, and infectious and chronic diseases, and they have a significantly shorter life expectancy than the general population.[174,176,246] Canada, as a highly developed and industrial country, is not unique in dealing with social inequities. In Europe, a recent WHO review of inequities across 53 European countries showed significant disparities within and between countries, with the minority Roma people being one of the most disadvantaged.[247] In the United States, minority groups such as blacks or African Americans, Hispanics or Latinos, American and Alaskan indigenous peoples, Asian Americans, and other ethnic minorities continue to be negatively impacted by social and health inequities.[152]

With regards to countries with Official Language Minorities, examples in Wales show that even though Welsh speakers represent about 20% of the total population, they continue to experience significant roadblocks in their quest for access to health services in their language with English as the language of service being reinforced by the British Medical Association.[248] In Belgium and Spain, Official Language Minorities enjoy constitutional protection and guarantees of their language which, unlike in Canada and Finland, extend beyond the national government to regional and even municipal levels.[249] It can be argued that a more favourable and extensive constitutional and policy environment benefits Official Language Minorities more in Spain, Belgium, and to a lesser extent in Wales and in Finland, compared to Canada. The lack of constitutional and policy coherence in Canada between the Federal and

provincial/territorial/municipal levels leads OLMCs and especially minority Francophones in Canada to experience one of the greatest disparities within their country compared to other Official Language Minority groups in the developed world. Very recently in Wales, UK, there has been a surge in political will undergirding policy action by the government of Wales is enabling greater access to health services in their language by Welsh speaking minorities.[250] This is a growing success story that brings a ray of hope to Canadian OLMCs who, like their Welsh counterparts, are seeing increasing government support at the federal level, to some extent at provincial and territorial levels as well.[251]

7.1.3. Impact of insufficient data on OLM research

Clearly, among the key findings that this research has identified, are the difficulties and challenges of doing minority research in general and OLM research in particular, in Canada. Our analyses in both the SVOLM and the CCHS were conditioned by the data and many of the determinants we had anticipated considering, such as language of service with the physician or nurse, were excluded due to very low number of responses recorded, as these were sub-questions at the third or fourth level. Additionally, the CCHS yielded a sample size of OLM older adults too small for robust multivariable analyses, leading as a result, to the finding of no association between OLM status and self-rated health. This limitation of no association between OLM status and self-rated health or even mental health, is not unique to this study. Official Language Minority researchers have encountered this challenge and have resorted to different strategies with varying degrees of success.[193,252] For large scale Canada-wide quantitative studies such as this one, avenues other than using Statistics Canada's data would be extremely expensive and impossible to carry out with respect to OLMs. Researchers are therefore limited by the data from

Canada's public statistics agency. Data limitations as experienced in this research are allegedly due to budgetary constraints, as data collection is expensive.[253] As evidenced here, this intentional data attrition has an impact on research and research findings. Even though political efforts by OLMCs led to the first survey of its kind in Canada, the SVOLM, a survey of only OLMs, the quality of the data collected did not allow us to explore at a statistically important level some of the key variables of interest to Official Language Minorities. For example, we were not able to explore variables such as "language spoken with health professionals," "quality of healthcare in the community," and "active offer," which inquires about the ability of health professionals or the healthcare system to intentionally promote their services and actively offer them in the minority language, and to the minority group, without waiting to be asked. Focusing on variables at the provincial and especially the health region level would have been more helpful in assessing barriers to access to health services and their impact of the health of OLM older adults.

One of the advantages of the SVOLM was that as a post-census survey, many of the variables were derived from the 2006 mandatory long-form census. However, a government policy on June 17, 2010 set the stage for the cancellation of the mandatory long form census and its replacement with the voluntary National Household Survey (NHS) starting with the 2011 census. Researchers agree on the negative impact of this policy on data quality, and hence on the health and wellbeing of Canadians.[254,255] Jean-Pierre Corbeil, the chief statistician who conducted the SVOLM in 2006 and was the lead analyst for the languages section of the 2011 census, noticed a great discrepancy in the data between the 2006 and the 2011 censuses that would have a negative impact on data quality, and especially on data comparability and attributed this discrepancy to the change in questionnaire.[256] If data precision and quality lacks in quantitative

minority research in optimal circumstances, data imprecision can only be further exacerbated by biases such as selection bias, and insufficient data or lack thereof in voluntary survey data, given the evidence from research that shows that people from the lowest and highest socioeconomic groups tend to have the lowest response rates to voluntary surveys.[257] This decline in data precision due to a move away from mandatory surveys, leads to a poor quality and reliability of data collected voluntarily nationwide and the weak ability of such a process to inform policies.

7.1.4. OLM population size and policy

This research also elicited the fact that there seems to be an association between OLMs' population size or weight and the policy level or approach towards them. Canadian provinces with an OLMC population proportion of less than 3% tended to have linguistic policies of non-intervention while provinces with hands-on approach policies, such as Ontario and New Brunswick, had a higher OLMC population proportion. Manitoba also has a more hands-on approach in its policies towards its Francophone population, who represent only 3.8% of the population in the province, because the vast majority of Franco-Manitobans are clustered in and around the greater Winnipeg area. Demographic weight alone, as pointed out above, does not determine the vitality of OLMCs. Rather, and to a greater extent, it is the constitutional base and the policy regimes that play a significant role in enhancing the vitality of OLMCs and even in determining their population size and weight. As it turns out, the better the linguistic policy environment, the greater the population growth and vitality. Unfortunately, the long history of hostile policy environment has stunted the growth and vitality of OLMCs by limiting access to services in their language.

Our research looked at minority Anglophone older adults in Quebec who, at 13.4%, represent a significant proportion of the Quebec total population, with 80% clustered mainly in and around the greater Montreal area, and compared them to older adults of the minority Francophone population in the rest of Canada, which is evaluated at being only 5% of the Canadian population outside of Quebec. The findings showed that Quebec's minority Anglophones older adults had a greater expectation of receiving services in their minority language. They also had a greater sense of belonging to their minority community than Francophone older adults in the rest of the country. This may explain in part why overall, they rated their health better. As discussed in the third article, assimilationist policies have a greater impact in a context of acute minority status and over time, further distance and alienate OLM populations from their culture and communities. As seen in the CSDH Framework for Action, the policy environment is one of the determinants of health inequities. Favourable policies will reduce inequities, while ineffectual or discriminatory policies will perpetuate them. In the OLMC context, positive policies are ones that arise out of minority community needs and realities, with accountability built into the process of implementation. They are policies that according to Rossell's Framework, are equitable, effective, and efficient and lead to better health.

It can be argued that from a governance perspective, a hands-off approach to OLMC policy-making is one that empowers minority communities to be self-reliant, autonomous, and responsible for their own destiny, health, and wellbeing. This position is at the core of the Fraser's Institute argument for a more efficient approach to dealing with OLMCs in English-speaking Canada.[233] It is the approach of decentralization that on the surface, seems to have a lot of merit. However, as has been shown, it is one that leads only to further assimilation and disempowerment of OLM populations, since OLMCs themselves recognize that they do yet not

have the capacity to be self-sufficient.[258] Their dispersion across Canada and unfavourable language and educational legislation have not enabled them to be as self-sustaining as they would want to be. Moreover, settlement policies as shown earlier eroded their capacity for total self-governance. What is needed more, it seems, is a strong partnership that builds on their strengths and on the constitutional responsibilities of both federal and provincial/territorial governments to create an environment of optimal vitality, and hence, greater sense of belonging; and with a greater sense of belonging, better health.

7.1.5. Policy regimes and access to health services in French for OLMCs

Above and beyond the population size of OLMCs, which is often invoked by the various levels of government to justify their action or inaction with regards to OLMCs, is the issue of policy regimes.[23] As highlighted throughout this study, the Constitution Act of 1867, the Official Languages Act of 1969 and its amendment of 1988, and the Canadian Charter of Rights and Freedoms of 1982, all set the legal and constitutional parameters that generally guarantee services in both official languages generally at the federal government level. The extent to which provincial and territorial governments offer language-appropriate services to OLMCs depends to a large extent on their policy regimes. As a result, by the virtue of being the only officially bilingual province, New Brunswick has the highest policy regime that is both comprehensive and effective in providing services in French to its Francophone Minority population. Quebec and Manitoba have the second highest policy regime as a result of linguistic obligations being entrenched in the constitution when these provinces entered the Canadian confederation. The third highest policy regime is that of the provinces and territories with legislative measures such as Ontario, Nova Scotia, Prince Edward Island, Yukon, Northwest Territories, and Nunavut.

Among the lowest policy regimes, Saskatchewan and Alberta have limited policy documents and a restrictive approach towards French, and finally, the provinces with the weakest policy regimes are British Columbia and Newfoundland and Labrador, the only two provinces with no language policies.[23]

In addition, governments regardless of political orientation, tend to focus on being re-elected by catering to the needs of the majority and only sizable minority communities. In such an environment, political pragmatism and expediency take precedence and usually leave minority Francophones without the services they need. If one of the strongest indicators of assimilation is not being able to speak one's language in a minority context for a particular group, as has been shown, for example, with First Nation populations in Canada and acknowledged by the Canadian Federal Government, Saskatchewan's Fransaskois community is living in a high assimilation context.[223,259] This poses significant political challenges for provincial governments which have adopted so far an incremental approach in their policies towards the Fransaskois community. In addition to weak political will and low political capital, these provincial and territorial policies are generally limited in their scope and effectiveness. In addition, they are often inconsistent or not synchronized with federal policies, which has often had a negative impact on the health and wellbeing of the targeted population groups.[260,261] This may also be due to government bias towards efficiency at the expense of equity and effectiveness, as governments are generally reluctant to increase expenditures for causes that may not be enthusiastically supported by the majority population, and thus risk jeopardizing their political future.

Even though provincial policies are implemented generally on the basis of the demographic weight of OLMCs and to some extent on political expediency, it is important to acknowledge the

role of policy regimes in favouring or disfavouring openness to the OLMCs in the first place and acknowledging their contribution to the overall vitality of the provinces. [216,262]

7.2. Strengths of this study

This research is based on Statistics Canada surveys that boast a robust sampling design. Its methodology enabled a cross-survey study of both the SVOLM and the CCHS in order to gain insights into the determinants of OLM older adults' health compared with that of the general population. One of strengths of this study is the critical examination of each of the various conceptual models and frameworks used, and their integration in one Overarching Framework. This appropriate integration of conceptual models helped situate the research within an initial framework of reference (Population Health); establish the legitimacy of the study (Constitutionality of official languages); better define, understand, and select variables (Andersen Model); frame the findings in their proper context with regards to health disparities between OLM older adults and the general population (CSDH Framework for Action); and adequately interpret and evaluate the policies affecting OLMCs (Rossell Framework).

A significant contribution of this thesis is its overall design. Two national data sets were subjected to rigorous quantitative analysis to extract the most information on the health determinants of older adults in OLMCs in spite of data limitations. In the context of a PhD research project with limited funding, these data sets were utilized to maximum effect and integrated to a variety of models. Integration of these models led to the concluding analysis of health policy as a key determinant of health using the Rossell Framework. This analysis points to a significant outcome of this research, which is the negative effect of policy incoherence between federal, provincial and regional levels of government on the health outcomes of minority

communities. This is an avenue that clearly deserves further study and possibly political advocacy by and for these communities.

By focusing on OLM older adults' health and the impact of their minority status on their health, this study contributes to the knowledge in the area of minority research in Canada and OLM research in particular. By identifying some of the problems inherent in OLM research in Canada, it opens up possibilities for more fruitful research for the health and vitality of OLMCs. Its greatest strength may lie in its ability to stir the debate towards less disparity and more equitable policies for OLMCs.

7.3. Limitations of this study

This study presents several limitations as already highlighted in the articles above. The cross-sectional design of this research does not establish the direction of the association between self-rated health and its predictors, and whether or not the independent variables preceded the outcome variable. The high number of missing cases prevented analysis of some of the variables of interest, especially those at the provincial and health region levels. In some cases, this limitation was overcome by combining categories. Another limitation has to do with the combined limitation of the Andersen Model's overly behavioural approach and some of the mostly behavioural variables we were not able to include in the study due to a high number of missing cases. However, this limitation was not enough to bias our findings or affect the strength of associations found in the statistical analyses. In addition to robust statistical analyses, the statistical model in the end still had a fair number of variables in the "health behaviour" category, as well as a balanced distribution of variables in most other categories of the Andersen Model.

One other notable limitation has to do with the use of multiple linear regression with an outcome variable such as self-rated health ordinally but not continuously distributed. We started with ordinal regression but the proportional odds assumption was tested and not satisfied. A brief consideration was given to logistic (binary) regression. However, combining the five categories of the outcome variable of self-rated health in addition to a significant potential loss in information, led to a negative Hosmer and Lemeshow goodness of fit test. As a result, although using multiple linear regression was a limitation in this case, we proceeded only after all of its assumptions were satisfactorily met. Ordinally distributed outcome variables such as self-rated health have been used in multiple linear regression analyses in studies.[263,264,265] Given that all the assumptions of multiple linear regression were met, there is great confidence in the associations found between self-rated health and its predictors in the analyses carried out in this research.

Another potential limitation for this research is the low R-square values respectively of .25 for the SVOLM and .32 for the CCHS. This is explained as noted above, by the lack of variables of "need" in the Andersen Model. Despite this, R-square values as low as .25 and even lower, are common and acceptable in the social sciences, unlike in the physical sciences where R-square values are acceptable from .60.[266]

Perhaps the greatest limitation of this study is the inability of multivariable analyses to assess an association between OLM status and self-rated health. The low sample of OLM individuals in the sample helped explain this limitation, and extensive descriptive multivariable analyses point to disparities between OLM older adults' self-rated health and that of older adults in the general Canadian population.

7.4. Implications for further research

This research's major limitation above is perhaps one of the greatest implications of this study. OLM research in Canada is highly handicapped by lack of quality and reliable data. Researchers engaged in future quantitative research among OLMs, whether at the national level or at smaller geographic levels such as cities or health regions, need to be aware of the difficulty of carrying out inferential analyses and will have to adopt creative approaches that include combining survey cycles or carrying out its own surveys, especially at city or health region levels.

This research also opens up a still under-explored area of older adults' research among OLMCs, the area of language of care and health among OLM older adults. It also opens up possibilities into another under-researched area, that of the impact of policies of assimilation on the health and vitality of OLMCs.

We were able in this study, to show through the CSDH Framework for Action, the impact of policy regimes on constitutionally defined minorities such as OLMCs and their role in furthering or addressing health inequities. As a result, this research successfully tested the CSDH Framework for Action for Canadian Minority Francophone older adults. The avenues this research opens up include testing this assumption of the role of policies on health disparities with other constitutionally defined minority groups such as Canada's Aboriginal populations. Perhaps an even greater avenue for further research is the inquiry into the extent to which policy and/or policy regimes apply to non-constitutionally protected minorities such as immigrants and other minority groups, and act as a structural determinant of health inequities negatively affecting them.

7.5. Conclusions

The current rise in interest in research about the health of OLMCs in Canada is attributable for the most part to government initiatives started in the early 2000s, which led to the first survey of its kind, the SOVLM. Since then, we have seen sustained focus on the health and vitality of OLMCs though the current government's five-year Road Maps, with the latest expiring in 2018. Although it can be rightly argued that the government interest is the result of years of lobbying by tireless researchers and OLMC activists, it should be acknowledged that it is the political will and interest of the government that has set the topic on its current course. As seen in this research, health questions and research inevitably lead to politics and policy inquiries. The two are intertwined, especially given the Canadian context of universal health care, the linguistic duality of the country, and Canadian values of equity and justice guaranteed by the Constitution and especially by the Charter of Rights and Freedoms. This context made this research a worthwhile endeavour. For OLMCs to live in a context of disparities, regardless of their ethnicity, cultural, or linguistic background, is not the Canadian way. This study demonstrates how the disparities negatively and disproportionately affect the health of OLM older adults and calls for improved policies and greater collaboration between the federal and provincial/territorial governments to arrive at greater positive policy coherence. As this is achieved, Francophone minority older adults will experience a higher sense of belonging to their minority community, and their communities will enjoy increased vitality, two determinants found in this research to be positively associated with their self-rated health.

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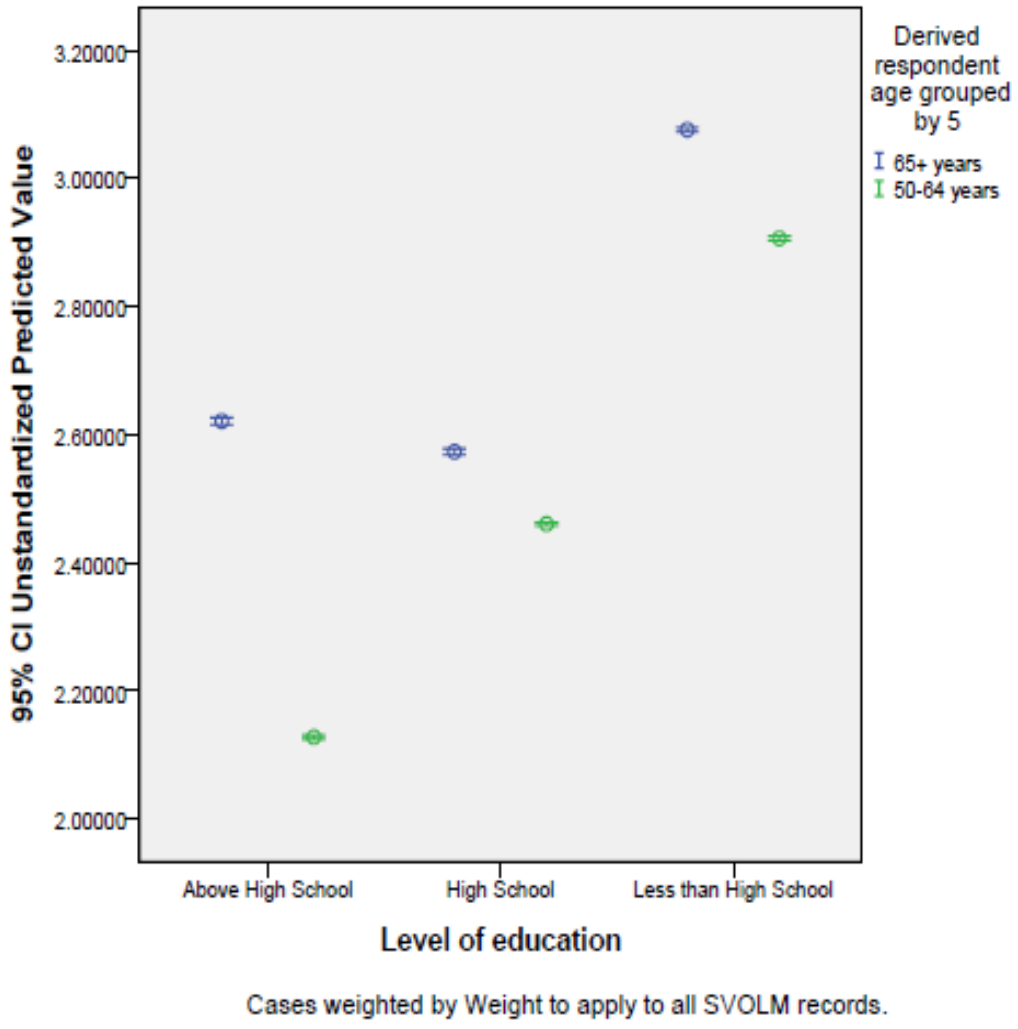
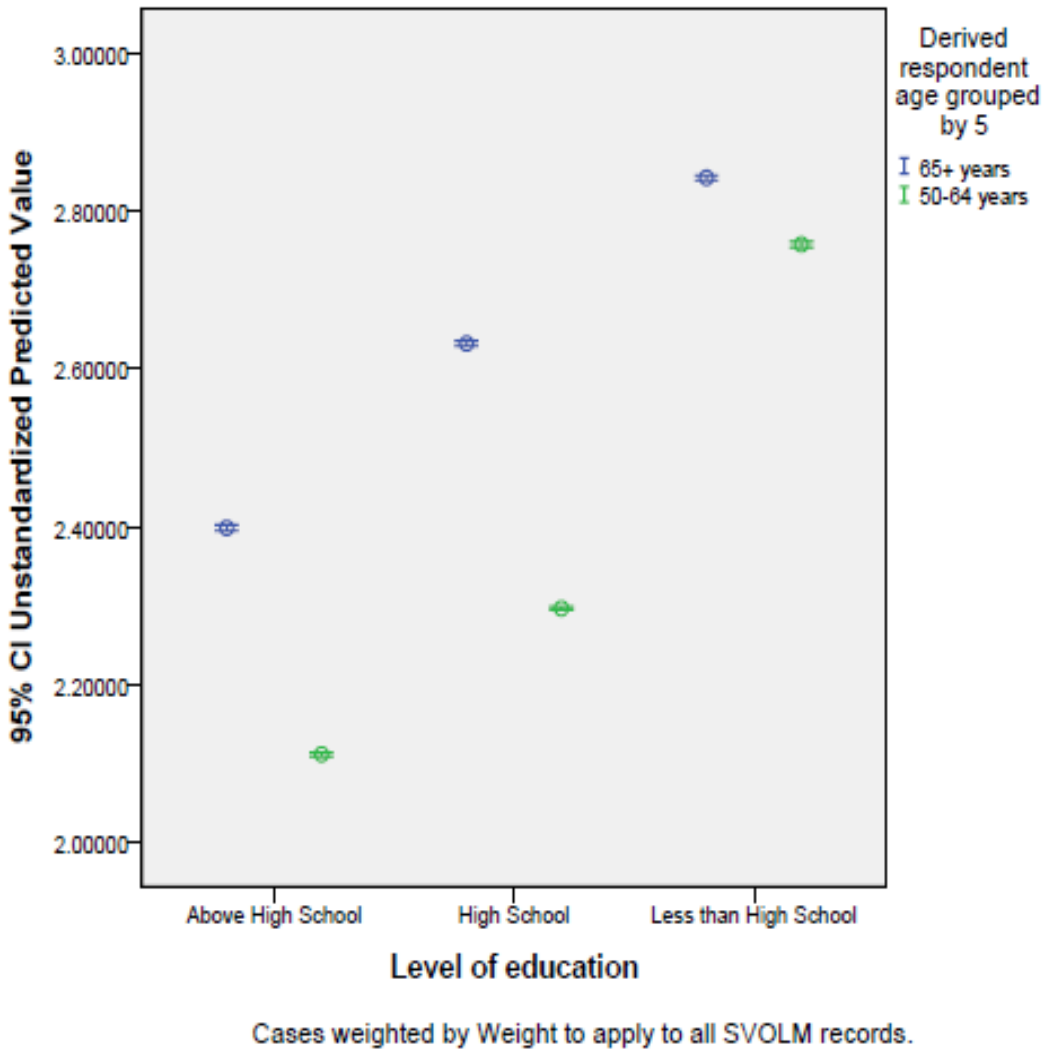
APPENDICES

Appendix A: Graph of predicted probabilities for Francophone seniors outside of Quebec

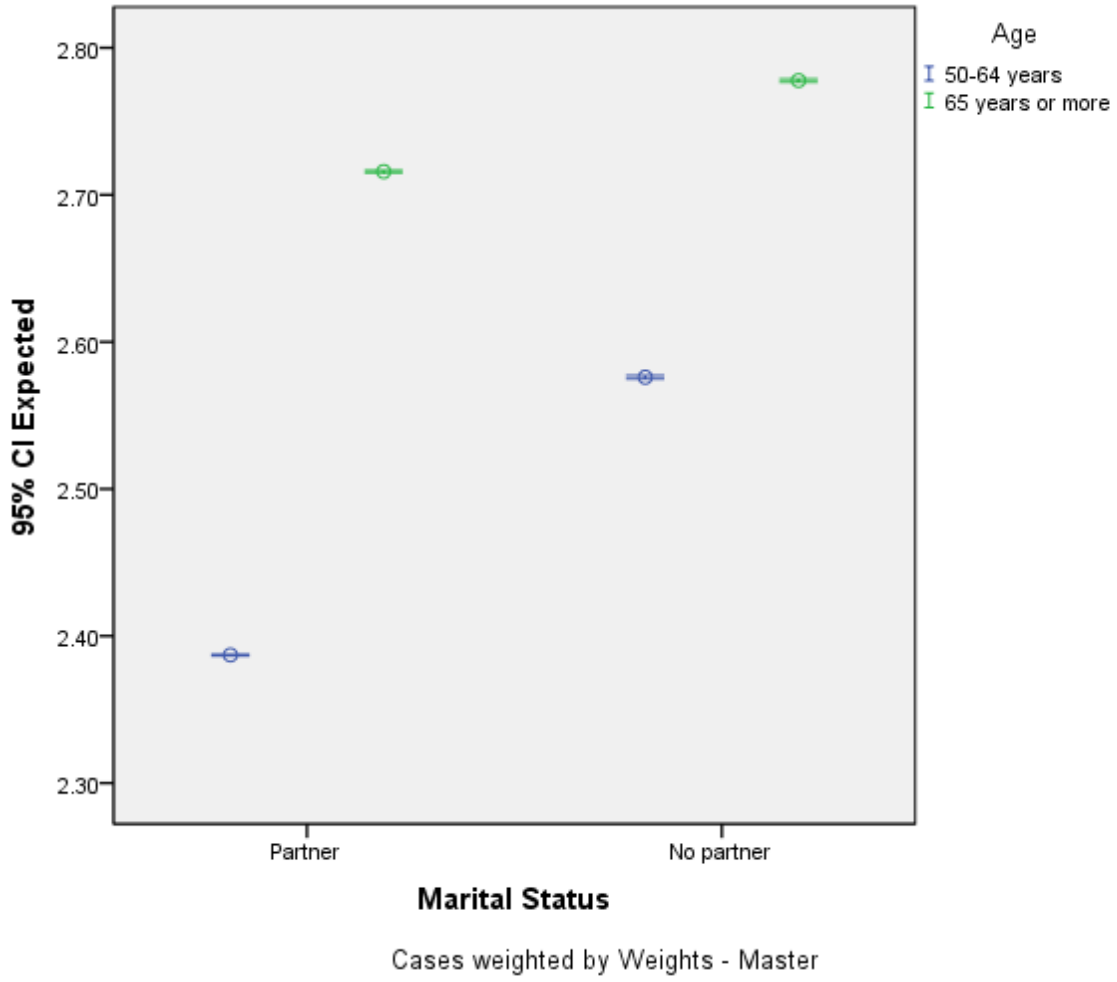


Cases weighted by Weight to apply to all SVOLM records.

Appendix B: graph of predicted probabilities for Anglophones seniors in Quebec



Appendix C: Graph of predicted probabilities for Canadian older adults



Appendix D: Ethics Exemption

UNIVERSITY OF SASKATCHEWAN

Research Ethics Office
NRC/PBI Building Box 5000 RPO University
1607 – 110 Gymnasium Place Saskatoon SK S7N 4J8 Canada
Telephone: (306) 966-2975 Facsimile: (306) 966-2069

To: Hubert Alimezelli, PhD(c)
Department of Community Health & Epidemiology
College of Medicine
University of Saskatchewan

Date: July 17, 2012

Thank you for submitting information about your PhD project research entitled *"Characteristics and determinants of Self-rated Health Among Official Language Seniors Living in Minority a Situation in Canada"*. This memorandum certifies that your project is exempt from the ethics review process. For your objectives 1-3 the exemption is based on Article 2.2 of the Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans, December 2010: Research that relies exclusively on information that is publicly available (e.g., Statistics Canada public use files), or made accessible through legislation or regulation, does not require REB review.

Your 4th objective is also exempt based on Article 2.1 that specifies "research may involve interaction with individuals who are not themselves the focus of the research in order to obtain information. Such individuals are not considered participants for the purposes of this Policy. This is distinct from situations where individuals are considered participants because they are themselves the focus of the research."

This exemption is based on the information you provided on July 12, 2012.

It should be noted that though your project is exempt of ethics review, your project should be conducted in an ethical manner (i.e. in accordance with the information that you submitted). Any deviation from the original methodology and/or research question should be brought to the attention of the Behavioral Research Ethics Board for further review.

Sincerely,

Dr. Beth Bilson, Chair
Behavioural Research Ethics Board
University of Saskatchewan

Appendix E: Relevant variables from the SVOLM

Var. Name	Question/Concept	Codes
	Information Module	
PROV2	Province of residence	10 Newfoundland and Labrador 11 Prince Edward Island 12 Nova Scotia 13 New Brunswick 24 Quebec 35 Ontario 46 Manitoba 47 Saskatchewan 48 Alberta 59 British Columbia 63 Yukon, NWT, Nunavut
P_PROV2	Province of residence	1 Ontario 2 Quebec 3 New Brunswick 4 Other provinces and territories
IN_QUE	Indicator of Quebec and Canada less Quebec	1 Quebec 2 Canada less Quebec
DOMGEO	Geographic region stratum	100 Newfoundland and Labrador 110 Prince Edward Island 120 Nova Scotia 131 New Brunswick North 132 New Brunswick Rest 133 New Brunswisk South East 241 Quebec Estrie and South 242 Quebec East 243 Quebec Montreal 244 Quebec West 245 Quebec and surrounding area 246 Quebec rest 351 Ontario North East 352 Ontario Ottawa 353 Ontario Rest 354 Ontario South East 355 Ontario Toronto 460 Manitoba 470 Saskatchewan 480 Alberta 590 Colombie-Britannique 630 Yukon, Territoires du Nord-Ouest et Nunavut

SEX	Respondent's sex.	1 Male 2 Female
AGE_5	Respondent's age by 5 year groups.	01 < 20 02 20 - 24 03 25 - 29 04 30 - 34 05 35 - 39 06 40 - 44 07 45 - 49 08 50 - 54 09 55 - 59 10 60 - 64 11 65 +
MARST	Respondent's marital status.	1 Married 2 Living common-law 3 Widowed 4 Separatd 5 Divorced 6 Single, never married

Respondent Identification (ID) Module

ID_Q01	Which language(s), English or French, do you know well enough to conduct a conversation? Is it...	1 English only? 2 French only? 3 English and French?
ID_Q021	What language do you speak most often at home? (1st response)	1 English 2 French 3 Other
ID_2ALL	All languages reported at ID_Q02 - grouped.	1 English only 2 French only 3 Other language(s) 4 English and French 5 English and other 6 French and other 7 English, French and other
ID_Q031	What is the language that you first learned at home in childhood and still understand? (1st response)	1 English 2 French 3 Other
ID_3ALL	All languages reported at ID_Q03 - grouped.	1 English only 2 French only 3 Other language(s) 4 English and French 5 English and other 6 French and other 7 English, French and other
ID_Q04	Were you born in Canada?	1 Yes 2 No 9 Don't know

ID_Q04A	In which province or territory?	10 Newfoundland and Labrador 11 Prince Edward Island 12 Nova Scotia 13 New Brunswick 24 Quebec 35 Ontario 46 Manitoba 47 Saskatchewan 48 Alberta 59 British Columbia 60 Yukon 61 Northwest Territories 62 Nunavut 77 Other 96 Not asked 98 Refusal 99 Don't know
ID_Q05	Landed immigrant status (Are you now or have you ever been a landed immigrant in Canada?	1 Yes 2 No 6 Not asked 8 Refusal 9 Don't know
ID_Q05A	In what year did you first come to Canada to live?	1919:2006 Year of arrival 9996 Not asked 9998 Refusal 9999 Don't know
CITIZEN	Canadian citizenship.	1 Yes 2 No 6 Not asked
PLOPRESP	Respondent's first official language spoken.	1 English 2 French 3 English and French
	Spouse module (EPX)	
EPX_Q011	What is the language that [spouse's name] (your partner) first learned at home in childhood and still understands? (1st response)	1 English 2 French 3 Other 6 Not asked 8 Refusal 9 Don't know
EPX_1ALL	All languages reported at EPX_Q01 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other

		97 Not applicable 98 Refusal 99 Don't know
EPX_Q02	Which language(s), English or French, does [spouse's name] (your partner) know well enough to conduct a conversation? Is it...	01 English only? 02 French only? 03 English and French? 04 neither English nor French? 05 Unable to speak 95 Unknown 96 Not asked 98 Refusal 99 Don't know
EPX_Q03	How many years have you been living with [spouse's name]?	00 : 70 Years living with spouse 95 Unknown 96 Not asked 98 Refusal 99 Don't know
EPX_Q04	Was [spouse's name] born in Canada?	1 Yes 2 No 6 Not asked 8 Refusal 9 Don’t know
EPX_Q05	In what province or territory?	10 Newfoundland and Labrador 11 Prince Edward Island 12 Nova Scotia 13 New Brunswick 24 Quebec 35 Ontario 46 Manitoba 47 Saskatchewan 48 Alberta 59 British Columbia 60 Yukon 61 Northwest Territories 62 Nunavut 77 Other 96 Not asked 98 Refusal 99 Don’t know
FL_SPO	Spouse's language first learned at home in childhood and still understood.	01 English 02 French 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other

		97 Not applicable 98 Refusal
ENDO_EXO	Endogamous or exogamous couples: respondent and spouse.	1 Endogamous 2 Exogamous 9 Don't know, Refusal, Not asked
	Respondent's parents (PAR) Module	
PAR_Q02	Was your mother born in Canada?	1 Yes 2 No 8 Refusal 9 Don't know
PPAR_Q31	What is the language that your mother first learned at home in childhood? (1st response)	1 ENGLISH 2 FRENCH 3 ITALIAN 4 ARABIC 5 SPANISH 6 CREOLE 7 CHINESE 8 OTHER 9 Don't know or Refusal
PAR_3ALL	All languages reported at PAR_Q03 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other 98 Refusal 99 Don't know
PAR_Q06	Was your father born in Canada?	1 Yes 2 No 8 Refusal 9 Don't know
IMMGPERE	In what year did he come to Canada to live for the first time, if ever?	00 Father never come to Canada to live 01 1919-1970 04 1971-1980 05 1981-1990 06 1991-2000 07 2001-2006 08 1880-1970 09 1971-2006 10 1880-1918 96 Not asked
PPAR_Q71	What is the language that your father first learned at home in childhood? (1st response)	1 ENGLISH 2 FRENCH 3 ITALIAN

		4 ARABIC 5 SPANISH 6 CREOLE 7 CHINESE 8 OTHER 9 Don't know or Refusal
PAR_7ALL	All languages reported at PAR_Q07 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other 98 Refusal 99 Don't know
ENEX_PAR	Endogamous or exogamous couples: respondent's parents.	1 Endogamous 2 Exogamous 9 Don't know, Refusal, Not asked
	Respondent's language skills (KOL) Module	
KOL_Q011	What is your main language, that is, the language in which you are most at ease when speaking? (1st response)	1 English 2 French 3 Other 5 Unknown 6 Not asked 9 Don't know
KOL_1ALL	All languages reported at KOL_Q01 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other 95 Unknown 97 Not applicable 99 Don't know
KOLQ01A1	In which language, English or French, are you most at ease when speaking? (1st response)	1 English 2 French 5 Unknown 6 Not asked 9 Don't know
KOLQ01A2	In which language, English or French, are you most at ease when speaking? (2nd response)	0 No response 1 English 2 French
KOL_Q02	If you had to use English <u>very often</u> in your daily activities outside of your home, for example	1 that it would NOT be POSSIBLE?

	at school, at work, in stores, would you say...	2 that it would be POSSIBLE, but with difficulty? 3 that it would be EASY ENOUGH? 4 that it would be VERY EASY? 5 Unknown 6 Not asked 9 Don't know
KOL_Q02A	Compared to five years ago, would you say that you now use more English, less English or the same in your daily activities?	1 More 2 Less 3 Same 4 Not applicable 5 Unknown 6 Not asked 8 Refusal 9 Don't know
PKOL_Q03	At what level do you place your ability to <u>read</u> English? Is it...	1 weak? 2 fair? 3 good? 4 very good? 1 5 Does not know how to read or does not know how to read English 9 Unknown, Not asked, Refusal, Don't know
PKOL_Q04	At what level do you place your ability to <u>write</u> English? Is it...	1 weak? 2 fair? 3 good? 4 very good? 5 Does not know how to write or does not know how to write English 131 18,736 9 Unknown, Not asked, Refusal, Don't know
KOL_Q05	If you had to use French <u>very often</u> in your daily activities outside of your home, for example at school, at work, in stores, would you say...	1 that it would NOT be POSSIBLE? 2 that it would be POSSIBLE, but with difficulty? 3 that it would be EASY ENOUGH? 4 that it would be VERY EASY? 5 Unknown 6 Not asked 8 Refusal 9 Don't know

KOL_Q05A	Compared to five years ago, would you say that you now use more French, less French or the same in your daily activities?	1 More 2 Less 3 Same 4 Not applicable 5 Unknown 6 Not asked 8 Refusal 9 Don't know
PKOL_Q06	At what level do you place your ability to read French? Is it...	1 weak? 2 fair? 3 good? 4 very good? 5 Does not know how to read or does not know how to read French 9 Unknown, Not asked, Refusal, Don't know
PKOL_Q07	At what level do you place your ability to write French? Is it...	1 weak? 2 fair? 3 good? 4 very good? 5 Does not know how to write or does not know how to write French 9 Unknown, Not asked, Refusal, Don't know
MAINLANG	Respondent's main language.	1 English 2 French 3 English and French

Respondent's schooling (EDU) Module

PEDU_Q02	What is the highest level of education that you have attained?	1 University studies with degree (bachelor's degree, master's degree, earned doctorate) 2 University studies with certificate or diploma 3 University studies without degree, certificate or diploma 4 Non-university studies with certificate or diploma 5 Non-university studies without certificate or diploma

		6 Secondary studies with high school diploma or high school equivalency certificate 7 Partial high school 8 Elementary school 9 No schooling
EDU_Q03	Did you do any or all of your university studies in [Langue]?	1 Yes - all 2 Yes - some 3 No 6 Not asked 9 Don't know
EDU_Q04A	After your secondary studies, did you do any or all of your non-university studies in [Langue]?	1 Yes - all 2 Yes - some 3 No 6 Not asked 9 Don't know
EDU_Q05	Did you do any or all of your secondary studies in [Langue]?	1 Yes - all 2 Yes - some 3 No 6 Not asked 7 Not applicable 9 Don't know
EDU_Q05B	Was it in Canada?	1 Yes 2 No 6 Not asked
PED_Q5C1	In which province or territory was it? (1st response)	1 Ontario 2 Quebec 3 New Brunswick 4 Other provinces and territories 9 Don't know, Refusal, Not asked
EDU_Q06	Did you do any or all of your primary studies in [Langue]?	1 Yes - all 2 Yes - some 3 No 6 Not asked 8 Refusal 9 Don't know
EDU_Q06B	Was it in Canada?	1 Yes 2 No 6 Not asked 9 Don't know
PED_Q6C1	In which province or territory was it? (1st response)	1 Ontario 2 Quebec 3 New Brunswick 4 Other provinces and territories 9 Don't know, Refusal, Not asked

Linguistic trajectory Module

TRJ_Q01	In addition to [language(s) spoken most often at home], do you speak any other languages on a regular basis at home?	1 Yes 2 No 9 Don't know
TRJ1Q03A	Overall, how often do you speak [1st other language] at home?	01 Each day 02 Many times a week 03 A few times each week 04 One a week 05 A few times each month 06 A few times during the year 07 Once a year 08 Other 96 Not asked 99 Don't know
TRJ_Q041	Which languages do you speak most often with your friends outside your home? (1st response)	1 English 2 French 3 Other 4 Don't have any friends 8 Refusal 9 Don't know
TRJ_4ALL	All languages reported at TRJ_Q04 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other 08 Don't have any friends 98 Refusal 99 Don't know
TRJ_Q081	Which language did you speak most often at home when you were 15 years old? (1st response)	1 English 2 French 3 Other 6 Not asked 8 Refusal 9 Don't know
TRJ_Q101	Which language did you speak most often with your friends outside your home when you were 15 years old? (1st response)	1 English 2 French 3 Other 8 Refusal 9 Don't know
HORIENT	Language spoken at home. Note: Derived from ID_Q02 and TRJ_Q02.	1 English only 2 Mostly English 3 English and French equally 4 Mostly French

		5 French only 6 Neither English nor French
FORIENT	Language(s) spoken with friends. *Note:* 1-Derived from TRJ_Q04 and TRJ_Q04B.	01 English only 02 Mostly English 03 English and French equally 04 Mostly French 05 French only 06 Other 97 Not applicable
	Sense of belonging and subjective vitality (SEN) Module	
SEN_Q01A	How important is it to you that your children be able to speak French? Is it...	01 very important? 02 important? 03 somewhat important 04 not very important 05 not important at all 96 Not asked 98 Refusal 99 Don't know
SEN_Q01B	How important is it to you that your children be able to speak English? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 96 Not asked 98 Refusal 99 Don't know
SEN_Q02	Based on your life experience, to which group, among anglophones and francophones, do you identify? Is it...	01 to the francophone group only? 02 mainly to the francophone group? 03 both groups equally? 04 mainly to the anglophone group? 05 to the anglophone group only? 06 neither 98 Refusal 99 Don't know
SEN_Q04A	For the following, please indicate if the presence of [minority language] in your municipality is: very strong; strong; neither strong nor weak; weak; or very weak: In businesses and stores	01 very strong 02 strong 03 neither strong nor weak 04 weak 05 very weak 06 non existent 98 Refusal 99 Don't know
SEN_Q04B	(How do you perceive the presence of [minority language])	01 very strong 02 strong 03 neither strong nor weak

	In media, such as television, radio or newspapers	04 weak 05 very weak 06 non existent 98 Refusal 99 Don't know
SEN_Q04C	(How do you perceive the presence of [minority language]) In locally provided federal government services	01 very strong 02 strong 03 neither strong nor weak 04 weak 3 05 very weak 06 non existent 98 Refusal 99 Don't know
SEN_Q04D	(How do you perceive the presence of [minority language]) In locally provided provincial government services	01 very strong 02 strong 03 neither strong nor weak 04 weak 05 very weak 06 non existent 98 Refusal 99 Don't know
SEN_Q04E	Based on the number of anglophones and francophones in your municipality, do you believe that, overall, the presence of [minority language] should...	1 decrease? 2 stay the same? 3 increase? 8 Refusal 9 Don't know
SEN_Q05	Thinking of <u>the last 10 years</u>, in the municipality where you live, would you say that the presence of [minority language]...	1 has decreased? 2 has stayed the same? 3 has increased? 4 Not applicable 8 Refusal 9 Don't know
SEN_Q06	Compared with <u>today</u>, would you say that in <u>ten years from now</u>, in the municipality where you live, the presence of [minority language] will...	1 decrease? 2 stay the same? 3 increase? 8 Refusal 9 Don't know
SEN_Q07	How important is it to you that individuals or organizations work at the development of the [minority language community]? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 98 Refusal 99 Don't know

SEN_Q08	How important is it to you to be able to use [minority language] in your daily life? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 96 Not asked 98 Refusal 99 Don't know
SEN_Q08A	How important is it to you to be able to use [majority language] in your daily life? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 96 Not asked 98 Refusal 99 Don't know
SEN_Q09	How important is it to you that linguistic rights, such as education rights or the right to receive federal government services in [minority language] be respected in your province? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 98 Refusal 99 Don't know
SEN_Q10	How important is it to you that the provincial and federal government services be provided in [minority language]? Is it...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important at all? 98 Refusal 99 Don't know
SEN_Q11	Personally, would you say that your involvement in activities for the promotion of the [minority language community] is...	01 very strong? 02 strong? 03 neither strong nor weak? 04 weak? 05 very weak? 06 not involved at all 98 Refusal 99 Don't know
SEN_Q12	Overall, if you had to describe the vitality of the [minority language community] of your municipality, would you say that it is...	01 very strong? 02 strong? 03 neither strong nor weak? 04 weak? 05 very weak? 98 Refusal 99 Don't know

Access to health care services minor. lang. (HLT) Module

HLT_Q01	In general, would you say your health is:	01 excellent? 02 very good? 03 good? 04 fair? 05 poor? 95 unknown 98 refusal 99 don't know
HLT_Q01A	How important is it to you to get health care services in Language? Is it	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important? 06 no opinion? 95 unknown 98 refusal 99 don't know
HLT_Q01B	When you require the service of a public health or social services institution, do you feel comfortable asking for the service in Language?	1 Yes 2 No 3 Not important to ask for services in French/English 4 Not applicable 5 unknown 6 not asked 8 refusal 9 don't know
HLT_Q02	In general, how difficult would it be for you to get health care services in Language? Would it be …	01 very difficult? 02 difficult? 03 neither difficult nor easy? 04 easy? 05 very easy? 06 impossible? 95 unknown 96 not asked 98 refusal 99 don't know
HT_Q02A1	Why would it be difficult for you? (1st response)	001 Scarcity of English/French professionals 002 Communication problem 003 Service (availability, wait times, quality) 004 Accessibility (transportation problem, would not know where to go or what to do) 005 environment

		006 Behaviour of respondent or of professional and staff 995 unknown 996 not asked 999 don't know
HLT_Q03	Do you have a regular medical doctor?	1 Yes 2 No 5 unknown 8 refusal 9 don't know
HLT1Q03B	In the last 12 months, have you used, either for yourself or to help another person, the services of [your] [regular medical doctor]?	1 Yes, for myself 2 Yes, for another person 3 Yes, for myself and another person 4 No 5 unknown 6 not asked 8 refusal 9 don't know
HLT1Q03C	How many times have you used his/her services? (regular medical doctor)	001:365 Fam. Doctor -Use freq.- Last year 995 unknown 996 not asked 998 refusal 999 don't know
HLT1_Q04	Who spoke to him/her the most, yourself or the other person? (regular medical doctor)	1 Myself 2 The other person 3 Both equally 4 Cannot remember 5 unknown 6 not asked 9 don't know
HLT1Q4A1	For what reason did you use his/her services? Was it for …(1st response, regular medical doctor)	01 routine or on-going care? 02 a minor health problem? 03 a major health problem? 04 an emergency? 05 getting prescriptions, information or advice? 06 Other 95 unknown 96 not asked 98 refusal 99 don't know
HLT1Q4B1	In which language were you served? (1st response, regular medical doctor)	1 English 2 French 3 Other

		5 unknown 6 not asked 9 don’t know
MEDFAM	Language used with regular medical doctor - regrouped.	01 English 03 English and French 05 French 06 Other 97 Not applicable
HLT1Q04C	Were you served directly in [minority language] or did you have to ask for it? (regular medical doctor)	1 Directly served 2 Asked 3 Cannot remember 5 Unknown 6 Not asked 9 Don't know
HT1_Q04E	Why were you not served in [minority language]? (regular medical doctor)	01 Professional doesn't know the language 02 Respondent or attendant feels more at ease/does not know 03 Respondent is bilingual/discussion started in other language 04 Respondent's behaviour 05 Availability/Quality of service 06 Other 95 Unknown 96 Not asked 97 Not applicable 99 Don't know
HLT2Q03B	In the last 12 months, have you used, either for yourself or to help another person, the services of [a] [nurse]?	1 Yes, for myself 2 Yes, for another person 3 Yes, for myself and another person 4 No 5 Unknown 8 Refusal 9 Don't know
HLT2Q03C	How many times have you used his/her services? (nurse)	001 : 366 Nurse serv.-Use freq.-Last year 995 Unknown 996 Not asked 998 Refusal 999 Don't know
HLT2_Q04	Who spoke to him/her the most, yourself or the other person? (nurse)	1 Myself 2 The other person 3 Both equally

		4 Cannot remember 5 Unknown 6 Not asked 9 Don't know
HLT2Q4A1	For what reason did you use his/her services? Was it for... (1st response, nurse)	01 routine or on-going care? 02 a minor health problem? 03 a major health problem? 04 an emergency? 05 getting prescriptions, information or advice? 06 Other 95 Unknown 96 Not asked 98 Refusal 99 Don't know
HLT2Q4B1	In which language were you served? (1st response, nurse)	1 English 2 French 3 Other 5 Unknown 6 Not asked 9 Don't know
INFIRM	Language used with nurse - regrouped.	01 English 03 English and French 05 French 06 Other 97 Not applicable
HLT2Q04C	Were you served directly in [minority language] or did you have to ask for it? (nurse)	1 Directly served 2 Asked 3 Cannot remember 5 Unknown 6 Not asked 9 Don't know
HT2_Q04E	Why were you not served in [minority language]? (nurse)	01 Professional doesn't know the language 02 Respondent or attendant feels more at ease/does not know 03 Respondent is bilingual/discussion started in other language 04 Respondent's behaviour 05 Availability/Quality of service 06 Other 95 Unknown 96 Not asked 99 Don't know

HLT_Q4F	Are you aware of the existence of a telephone health line or telehealth service in your province (or territory)?	1 Yes 2 No 5 Unknown 6 Not applicable 8 Refusal 9 Don't know
HLT_Q04G	In the last 12 months, have you used, either for yourself or to help another person, the services of professionals from a telephone health line or telehealth service?	1 Yes 2 No 5 Unknown 6 Not applicable 8 Refusal 9 Don't know
HLTQ04H1	In which language were you served? (1st response)	1 English 2 French 3 Other 5 Unknown 6 Not asked 9 Don't know
INFOSAN	Language used with professional from a telephone health line of telehealth service - regrouped.	01 English 03 English and French 05 French 06 Other 97 Not applicable
HT_Q04J	Why were you not served in [minority language]?	01 Professional doesn't know the language 02 Respondent or attendant feels more at ease/does not know 03 Respondent is bilingual/discussion started in other language 04 Respondent's behaviour 05 Availability/Quality of service 06 Other 95 Unknown 96 Not asked 99 Don't know
HLT_Q05	[Besides your regular medical doctor's office, is / Is] there a place that you usually go to when you are sick or need advice about your health?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
HT_Q05A	Where do you go?	001 Hospital 002 Clinic 003 Health Service or Centre

		004 Other doctor, nurse, specialist (includes telephone health line) 005 Pharmacy 006 Non official source 007 Alternative medicine 008 Other 995 Unknown 996 Not asked 997 Not applicable 998 Refusal 999 Don't know
HLT_Q05B	In the last 12 months, have you used their services, either for yourself of another person?	1 Yes, for myself 2 Yes, for another person 3 Yes, for myself and another person 4 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know
HLT_Q05C	Who spoke the most, yourself or the other person?	1 Myself 2 The other person 3 Both equally 4 Cannot remember 5 Unknown 6 Not asked Don’t know
HLTQ05D1	For what reason did you use their services? Was it for... (1st response)	01 routine or on-going care? 02 a minor health problem? 03 a major health problem? 04 an emergency? 05 getting prescriptions, information or advice? 06 Other 95 Unknown 96 Not asked 98 Refusal 99 Don't know
HLTQ05E1	In which language were you served? (1st response)	1 English 2 French 3 Other 5 Unknown 6 Not asked 9 Don't know

AUTSANT	Language used with other health professional - regrouped.	01 English 03 English and French 05 French 06 Other 97 Not applicable
HLT_Q05F	Were you served directly in [minority language] or did you have to ask for it?	1 Directly served 2 Asked 3 Cannot remember 5 Unknown 6 Not asked 8 Refusal 9 Don't know
HT_Q05H	Why were you not served in [minority language]?	01 Professional doesn't know the language 02 Respondent or attendant feels more at ease/does not know 03 Respondent is bilingual/discussion started in other language 04 Respondent's behaviour 05 Availability/Quality of service 06 Other 95 Unknown 96 Not asked 99 Don't know

Civic participation (COM) Module

COM_Q01	In the past 12 months, were you a member of any organizations, networks or associations?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
COM_Q03	Among these, were you a member in order to promote or defend [language group] interests?	1 Yes 2 No 5 Unknown 6 Not asked 9 Don't know
COM_Q07	Do you know of any organizations, networks or associations where the activities are conducted in [Langue] in your municipality?	1 Yes 2 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know

Volunteering (VOL) Module

VOL_Q01	In the past 12 months, did you do (unpaid) volunteer work for any organization?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know

Social support (SOC)

SOC_Q011	If you became ill, who (besides your spouse) would you likely turn to for support? (1st response)	01 Children 02 Other family members 03 Friends 04 Community resource, volunteer or religious organization 05 Public social service institutions (hospitals, CLSC, Health Centres) 06 Nobody 07 Other 95 Unknown 98 Refusal 99 Don't know
SOC_Q02	In the past 12 months, did you assist someone who was not living in your household with everyday activities (without pay)?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
SOC_Q03	Did you do it on a regular basis?	1 Yes 2 No 5 Unknown 6 Not asked 9 Don't know
SOU_SOC	Language used when assisting someone with everyday activities - regrouped.	01 English only 02 Much more English than French 03 English and French equally 04 Much more French than English 05 French only 06 Other 97 Not applicable

Language use in the public sphere (PUB) Module

VOISIN	Language used with closest neighbours - regrouped.	1 English only 2 Much more English than French 3 English and French equally 4 Much more French than English 5 French only 6 Other

COMMERCE	Language used with store employees - regrouped.	1 English only 2 Much more English than French 3 English and French equally 4 Much more French than English 5 French only 6 Other
FORMUL	Language used to fill-in forms - regrouped.	01 English only 02 Much more English than French 03 English and French equally 04 Much more French than English 05 French only 95 Unknown
PUB_Q04	If you were to come into contact with the police, whether for requesting services or as the result of an offence, would you feel comfortable speaking [minority language]?	1 Yes 2 No 3 Not important to speak in French/English 4 Not applicable 5 Unknown 6 Not asked 8 Refusal 9 Don't know
PUB_Q05	If you were to use the services of a [lawyer and/or notary], how important would it be for you that he could speak [minority language]? Would it be...	01 very important? 02 important? 03 somewhat important? 04 not very important? 05 not important? 06 no opinion 95 Unknown 96 Not asked 99 Don't know
PUB_Q06	In general, do you ask to be served in [minority language] when you are communicating with employees of your municipality or province (territory)?	1 Yes 2 No 3 Not applicable 5 Unknown 6 Not asked 8 Refusal 9 Don't know
PB_Q0611	For what reason(s) don't you ask? (1st response)	01 Respondent feels more at ease in English/French 02 Respondent is bilingual 03 Quality / Availability of services 04 Employees do not speak English/French 05 Respondent's behavior 06 Not necessary 07 Other

		95 Unknown 96 Not asked 99 Don't know
PUB_Q07A	During the past two years, have you had contact with an employee from the [respondent's province or territory] Government in order to get services or information?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
PUB_Q07B	In general, how often were you able to use [minority language]? Was it...	01 always? 02 often? 1 03 occasionally? 04 rarely? 05 never? 95 Unknown 96 Not asked 98 Refusal 99 Don't know
EMP_PROV	Frequency of use of minority language with an employee from the provincial government - regrouped.	01 Always 02 Often 03 Occasionally 04 Rarely 05 Never 95 Unknown 97 Not applicable
PUB_Q08	In the past two years, have you had contact with an employee of the federal government in order to get services or information (for example, Old Age Security, passports, income tax, employment insurance)?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
PUB_Q08A	In general, how often did they address you in both English and French? Was it...	01 always? 02 often? 03 occasionally? 04 rarely? 05 never? 95 Unknown 96 Not asked 98 Refusal 99 Don't know
PUB_Q08B	In general, how often were you able to use [minority language]? Was it...	01 always? 02 often? 03 occasionally? 04 rarely? 05 never? 95 Unknown

		96 Not asked 98 Refusal 99 Don't know
EMP_FED	Frequency of use of minority language with an employee of the federal government - regrouped.	01 Always 02 Often 03 Occasionally 04 Rarely 05 Never 95 Unknown 97 Not applicable
PUB_Q08C	Were you served directly in [minority language] or did you have to ask for it?	1 Directly served 2 Asked 3 Cannot remember 6 Not asked 8 Refusal 9 Don't know
	Linguistic practices in leisure time (LEI)	
LEI_Q03B	In general, how difficult is it for you to get newspapers in [minority language]? Is it...	01 very difficult? 02 difficult? 03 neither difficult nor easy? 04 easy? 05 very easy? 06 impossible 07 never tried 95 Unknown 96 Not asked 98 Refusal 99 Don't know
LEI_Q04D	Overall, how would you evaluate the choice of books available in [minority language] at local bookstores?	01 Good 02 Fair 03 Poor 04 Non-existent 05 Never checked 95 Unknown 96 Not asked 98 Refusal 99 Don't know
LEI_Q08	In your region, how often is it possible to practice <u>organized</u> sports in [minority language]? Is it...	01 always? 02 often? 03 occasionally? 04 rarely? 05 never? 06 impossible? 95 Unknown 98 Refusal 99 Don't know

LEI_Q09	In the past 12 months, how often have you practiced organized sports? Was it...	01 most days? 02 a few times a week? 03 about once a week? 04 about once a month? 05 almost never? 06 never 95 Unknown 98 Refusal 99 Don't know

Geographic mobility (MOB) Module

MOB_Q01	[Have you/Since your arrival in Canada, have you] always lived in the same province?	1 Yes 2 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know
PMOB_Q2A	How many years in total, consecutive or not, have you lived in [respondent's province]?	01 0 - 4 02 5 - 9 03 10 - 14 04 15 - 19 05 20 - 24 06 25 - 29 07 30 - 34 08 35 - 39 09 40 - 44 10 45 - 49 11 50 - 54 12 55 - 59 13 60 + 96 Not asked, Unknown, Not applicable, Refusal, Don't know
MOB_Q03	Do you now live in a rural or an urban area?	1 Rural 2 Urban 5 Unknown 8 Refusal 9 Don't know
MOB_Q03A	How would you best describe the place in which you now live? Is it a municipality of...	1 less than 50,000 people? 2 50,000 to about 100,000 people? 3 100,000 people or more? 5 Unknown 6 Not asked 8 Refusal 9 Don't know

PMOB_Q3B	How many years have you been living there?	01 0 - 4 02 5 - 9 03 10 - 14 04 15 - 19 05 20 - 24 06 25 - 29 07 30 - 34 08 35 - 39 09 40 - 44 10 45 - 49 11 50 - 54 12 55 - 59 13 60 + 96 Not asked, Unknown, Not applicable, Refusal, Don't know
MOB_Q03C	Are you currently living in the same municipality as when you were born?	1 Yes 2 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know
MOB_Q04	When you were born, did you live in a rural or an urban area?	1 Rural 2 Urban 5 Unknown 6 Not asked 8 Refusal 9 Don't know
MOB_Q04A	How would you best describe the place in which you were born? Was it a municipality of...	1 less than 50,000 people? 2 50,000 to about 100,000 people? 3 100,000 people or more? 5 Unknown 6 Not asked 8 Refusal 9 Don't know
MOB_Q04G	Are you currently living in the same municipality as when you were 18?	1 Yes 2 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know
MOB_Q05A	When you were 18, were you living in a rural or an urban area?	1 Rural 2 Urban 5 Unknown 6 Not asked 8 Refusal

		9 Don't know
MOB_Q06	Do you foresee yourself moving out of your province or territory in the next five years?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
	Economic activity (ECO) Module	
ECO_Q01A	Last week, did you work for pay or in self-employment?	1 Yes 2 No 5 Unknown 8 Refusal 9 Don't know
ECO_Q02B	Last week, were you temporarily absent from a paid job?	1 Yes 2 No 5 Unknown 6 Not asked 8 Refusal 9 Don't know
ECO_Q02C	When did you last work for pay or in self-employment?	1 In 2006 2 In 2005 3 Before 2005 4 Never 5 Unknown 6 Not asked 8 Refusal 9 Don't know
	Language practices at work (WRK) Module	
WRK_Q011	What language [do/did] you use most often at work? (1st response)	1 English 2 French 3 Other 5 Unknown 6 Not asked 8 Refusal 9 Don't know
WRK_3ALL	All languages reported at WRK_Q03 - grouped.	01 English only 02 French only 03 Other language(s) 04 English and French 05 English and other 06 French and other 07 English, French and other 95 Unknown 97 Not applicable

WOL_Q05D	Official language used at work when having to read notes, letters, reports or other kinds of documents.	01 English or mostly English 02 English and French equally 03 French or mostly French 04 Unknown or non-official language only 97 Not applicable
WORIENT	Language used at work. *Note:* Derived from WRK_Q01 and WRK_Q03.	01 English only 02 Mostly English 03 English and French equally 04 Mostly French 05 French only 06 Other 97 Not applicable
	Income (INC) Module	
PHLDINC	Respondent's total household income. *Note:* Derived from INC_Q02, INC_Q03, INC_Q04, INC_Q05 and HHINC_PP.	01 less than $10,000? 02 $10,000 to less than $20,000 03 $20,000 to less than $30,000 04 $30,000 to less than $40,000 05 $40,000 to less than $50,000 06 $50,000 to less than $60,000 07 $60,000 to less than $80,000 08 $80,000 to less than $100,000 09 $90,000 to less than $100,000 10 $100,000 or more? 11 No income or loss 96 Not asked, Unknown, Refusal,Don't know
PERS_INC	Respondent’s personal income	01 less than $10,000? 02 $10,000 to less than $20,000 03 $20,000 to less than $30,000 04 $30,000 to less than $40,000 05 $40,000 to less than $50,000 06 $50,000 to less than $60,000 07 $60,000 to less than $80,000 08 $80,000 to less than $100,000 09 $90,000 to less than $100,000 10 $100,000 or more? 11 No income or loss 96 Refusal, Don't know
	Census variables	
CONCEN_I	Concentration index at the time of the Census (May 16, 2006).	1 Weak concentration 2 Medium concentration 3 High concentration

POPCLASS	Proportion of minority language speakers in the municipality reported at the time of the Census (May 16, 2006).	1 < 10 5 2 10 to 29.9 3 30 to 49.9 4 50 to 69.9 5 > = 70
POPTOTAL	Number of persons aged 18 years or older in the total population in the CSD reported at the time of the Census (May 16, 2006).	1 less than $10,000 less than $30,000 3 $30,000 to less than $50,000 4 $50,000 to less than $70,000 5 $70,000 to less than $90,000 6 $90,000 or more
PRCTPOP	Proportion of the total population that is in the target population by CSD reported at the time of the Census (May 16, 2006).(PCIBLE_C divided by POPTOT_C)	1 0 - 0,25 2 0,26 - 0,50 3 0,51 - 0,75 4 0,76 - 1
FAM	Census family status at the time of the Census (May 16, 2006).	01 Married 02 Common-law 03 Lone parent 04 Child or grandchild 05 Non family person 96 Not asked
STRU_FAM	Census family structure at the time of the Census (May 16, 2006).	01 Married with no kids 02 Married with kids 03 Common-law with no kids 04 Common-law with kids 05 Lone parent family 96 Not asked
P_HOURS	Hours worked last week as reported on the Census (May 16, 2006).	00 No response 5,454 628,836 01 1 - 4 02 5 - 14 03 15 - 24 04 25 - 34 05 35 - 44 06 45 - 54 07 55 - 64 08 65 - 74 09 75 + 96 less than 15 years, institutional resident
NB_ENFAN	Number of children in the household reported on the census (May 16, 2006).	00 None 01 One child 02 Two children 03 Three or more children 96 Not asked

LF_PUMF	Labour force activity at the time of the Census (May 16, 2006).	1 Employed 2 Unemployed 3 Not in labor force 9 Less than 15 years, institutional resident
RUINDFG	Rural-urban indicator flag at the time of the Census (May 16, 2006).	1 Rural Enumeration Area 2 Urban Enumeration Area

Appendix F: Relevant variables from the 2007 CCHS

Var. Name	Question/Description	Codes
	Introduction	
GEO_PRV	Province of residence of respondent	10 Newfoundland and Labrador 11 Prince Edward Island 12 Nova Scotia 13 New Brunswick 24 Quebec 35 Ontario 46 Manitoba 47 Saskatchewan 48 Alberta 59 British Columbia 60 Yukon 61 Northwest Territories 62 Nunavut
GEODPC	Postal Codes – (D)	Postal codes
GEODHR4	Health Region of residence of respondent - (D)	1011 Eastern Regional Integrated HA 1012 Central Regional Integrated HA 1013 Western Regional Integrated HA 1014 Labrador-Grenfell Regional Integrated HA 1101 Kings County 1102 Queens County 1103 Prince County 1201 Zone 1 (DHA 1 AND 2) 1202 Zone 2 (DHA 3) 1203 Zone 3 (DHA 4 AND 5) 1204 Zone 4 (DHA 6 AND 7) 1205 Zone 5 (DHA 8) 1206 Zone 6 (DHA 9) 1301 Region 1 1302 Region 2 1303 Region 3 1304 Region 4 1305 Region 5 1306 Region 6 1307 Region 7 2401 Région Du Bas-Saint-Laurent 2402 Région Du Saguenay-Lac-Saint-Jean

2403 Région De La Capitale-Nationale
2404 Région De La Mauricie/Centre-Du-Québec
2405 Région De L'Estrie
2406 Région De Montréal
2407 Région De L'Outaouais
2408 Région De L'Abitibi-Témiscaminque
2409 Région De La Cote-Nord
2410 Région du Nord-Du-Québec
2411 Reg. De La Gaspésie-Îles-De-La-Madeleine
2412 Région De La Chaudière-Appalaches
2413 Région De Laval
2414 Région De Lanaudière
2415 Région Des Laurentides
2416 Région De La Montérégie
3526 District Of Algoma Health Unit
3527 Brant County Health Alth Unit
3530 Durham Regional Health Unit
3531 ELgin-St Thomas Health Unit
3533 Grey Bruce Health Unit
3534 Haldimand-Norfolk Health Unit
3535 Haliburton/Kawartha/Pine Ridge HU
3536 Halton Regional Health Unit
3537 City Of Hamilton Health Unit
3538 Hastings And Prince Edward Counties HU
3539 Huron County Health Unit
3540 Chatham-Kent Health Unit
3541 Kingston, Frontenac, Lennox, Addington HU
3542 Lambton Health Unit
3543 Leeds, Grenville And Lanark DHU
3544 Middlesex-London Health Unit
3546 Niagara Regional Area Health Unit
3547 North Bay Parry Sound District HU
3549 Northwestern Health Unit
3551 City Of Ottawa Health Unit
3552 Oxford County Health Unit
3553 Peel Regional Health Unit
3554 Perth District Health Unit
3555 Peterborough County-City Health Unit

3556 Porcupine Health Unit
3557 Renfrew County And District HU
3558 The Eastern Ontario Health Unit
3560 Simcoe Muskoka District Health Unit
3561 Sudbury and District Health Unit
3562 Thunder Bay District Health Unit
3563 Timiskaming Health Unit
3565 Waterloo Health Unit
3566 Wellington-Dufferin-Guelph HU
3568 Windsor-Essex County Health Unit
3570 York Regional Health Unit
3595 City Of Toronto Health Unit
4610 Winnipeg
4615 Brandon
4620 North Eastman
4625 South Eastman
4630 Interlake
4640 Central
4645 Assiniboine
4660 Parkland
4670 Norman
4685 Burntwood/Churchill
4701 Sun Country
4702 Five Hills
4703 Cypress
4704 Regina Qu'Appelle
4705 Sunrise
4706 Saskatoon
4707 Heartland
4708 Kelsey Trail
4709 Prince Albert Parkland
4710 Prairie North
4714 Mamamawetan, Keewatin, Athabasca
4821 Chinook Regional Health Authority
4822 Palliser Health Region
4823 Calgary Health Region
4824 David Thompson RHA
4825 East Central Health
4826 Capital Health
4827 Aspen Regional Health Authority
4828 Peace Country Health
4829 Northern Lights Health Region
5911 East Kootenay
5912 Kootenay-Boundary

		5913 Okanagan 5914 Thompson/Cariboo 5921 Fraser East 5922 Fraser North 5923 Fraser South 5931 Richmond 5932 Vancouver 5933 North Shore, Coast Garibaldi 5941 South Vancouver Island 5942 Central Vancouver Island 5943 North Vancouver Island 5951 Northwest 5952 Northern Interior 5953 NorthEast 6001 Yukon 6101 Northwest Territories 6201 Nunavut
GEODPRG	Health Region Peer Group - (D)	01 Health Region Peer Group A 02 Health Region Peer Group B 03 Health Region Peer Group C 04 Health Region Peer Group D 05 Health Region Peer Group E 06 Health Region Peer Group F 07 Health Region Peer Group G 08 Health Region Peer Group H 09 Health Region Peer Group I
GEODUR	Urban and Rural Areas	0 Rural 1 Urban Core 2 Urban Fringe 4 Urban Area outside CMAS/CAS 6 Secondary Urban Core 9 Mix of Urban/Rural Areas
GEODUR2	Urban and Rural Areas - 2 levels - (D)	1 urban 2 rural
GEODPSZ	Population size group - (D)	1 rural area 2 urban area: < 30, 000 3 urban area: 30, 000 - 99, 999 4 urban area: 100, 000 - 499, 999 5 urban area: >= 500, 000
DHH_AGE	What is your age?	12 – 101 years
DHH_SEX	Respondent’s sex	1 male 2 female
DHH_MS	Marital Status	1 married 2 common-law 3 widowed 4 separated

		5 divorced 6 single, never married 97 don't know 98 refusal 99 not stated
DHHDYKD	Number of persons 15 years old or less in household - (D)	0 – 11 number of persons
DHHDOKD	Number of dependents 16 or 17 years old in household - (D)	0 – 3 number of persons

General Health (GEN)

GEN_01	In general, would you say your health is: (Self-perceived health)	1 excellent? 2 very good? 3 good? 4 fair? 5 poor? 7 don't know 8 refusal
GEN_02	Compared to <u>a year ago</u>. Would you say your health is:	1 much better now than 1 year ago? 2 somewhat better now (than 1 year ago)? 3 about the same as 1 year ago? 4 somewhat worse now (than 1 year ago)? 5 much worse now (than 1 year ago)? 7 don't know 8 refusal
GEN_02A	How satisfied are you with your life in general? (Satisfaction with life in general)	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 7 don't know 8 refusal 9 not stated
GEN_02B	In general, would you say your mental health is: (Self-perceived mental health)	1 excellent? 2 very good? 3 good? 4 fair? 5 poor? 7 don't know 8 refusal 9 not stated
GEN_07	Thinking about the amount of stress in your life, would you say that most days are:	1 not at all stressful? 2 not very stressful? 3 a bit stressful?

		4 quite a bit stressful?
	(Perceived life stress)	5 extremely stressful?
		6 not applicable
		7 don't know
		8 refusal
GEN_08	Have you worked at a job or business at any time in the past 12 months?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
GEN_09	Would you say that most days at work (in the past 12 months) were: (Self-perceived work stress)	1 not at all stressful? 2 not very stressful? 3 a bit stressful? 4 quite a bit stressful? 5 extremely stressful? 6 not applicable 7 don't know 8 refusal 9 not stated
GEN_10	How would you describe your sense of belonging to your local community?	1 very strong? 2 somewhat strong? 3 somewhat weak? 4 very weak? 7 don't know 8 refusal 9 not stated
GENDHDI	Perceived Health **Note:** Based on GEN_01. Higher scores indicate positive self-reported health status.	0 poor 1 fair 2 good 3 very good 4 excellent 9 not stated
GENDMHI	Perceived Mental Health **Note** Based on GEN_02B. See documentation on derived variables.	0 poor 1 fair 2 good 3 very good 4 excellent 9 not stated
CIH_1	In the past 12 months, did you do anything to improve your health? (For example, lost weight, quit smoking, increased exercise)	1 yes 2 no 7 don't know 8 refusal 9 not stated

CIH_2	What is the single most important change you have made?	1 Increased exercise, sports / physical activity 2 Lost weight 3 Changed diet / improved eating habits 4 Quit smoking / reduced amount smoked 5 Drank less alcohol 6 Reduced stress level 7 Received medical treatment 8 Took vitamins 9 Other 96 not applicable 97 don't know 98 refusal 99 not stated
CIH_3	Do you think there is anything (else) you should do to improve your physical health?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
CIH_4	What is the most important thing?	1 Start / Increase exercise, sports / physical activity 2 Lose weight 3 Change diet / improve eating habits 4 Quit smoking / reduce amount smoked 5 Drink less alcohol 6 Reduce stress level 7 Receive medical treatment 8 Take vitamins 9 Other 96 not applicable 97 don't know 98 refusal 99 not stated
CIH_5	Is there anything stopping you from making this improvement?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6A	What is that? - Lack of will power / self-discipline	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated

CIH_6I	What is that? - family responsibilities	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6B	What is that? -work schedule	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6J	What is that? - Addiction to drugs / alcohol	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6K	What is that? - Physical condition	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6G	What is that? - disability / health problem	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6F	What is that? - Too stressed	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6E	What is that? - Too costly / financial constraints	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6L	What is that? - Not available - in area	1 Yes 2 No 6 not applicable 7 don't know

		8 refusal 9 not stated
CIH_6M	What is that? - Transportation problem	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6N	What is that? - Weather problems	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_6H	What is that? - Other	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CIH_7	Is there anything you intend to do to improve your physical health in the next year?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
OH1_20	In general, would you say the health of your teeth and mouth is: (Self-perceived health of teeth and mouth)	1 excellent? 2 very good? 3 good? 4 fair? 5 poor? 7 don't know 8 refusal 9 not stated
	Health care system satisfaction (HCS)	
HCS_1	Overall, how would you rate the availability of health care services in your province? Would you say it is:	1 excellent? 2 good? 3 fair? 4 poor? 6 not applicable 7 don't know 8 refusal 9 not stated

HCS_2	Overall, how would you rate the quality of the health care services that are available in your province?	1 Excellent 2 Good 3 Fair 4 Poor 6 not applicable 7 don't know 8 refusal 9 not stated
HCS_3	Overall, how would you rate the availability of health care services in your community?	1 Excellent 2 Good 3 Fair 4 Poor 6 not applicable 7 don't know 8 refusal 9 not stated
HCS_4	Overall, how would you rate the quality of the health care services that are available in your community?	1 Excellent 2 Good 3 Fair 4 Poor 6 not applicable 7 don't know 8 refusal 9 not stated
	Height and Weight – Self-reported Module	
HWTDISW	BMI class. (18 +) / self-report - Intern. standard - (D)	1 underweight 2 normal weight 3 overweight 4 obese – class I 5 obese – class II 6 obese – class III 96 not applicable 99 not stated
	Chronic Conditions CCC Module	
CCC_031	(Do you have) asthma?	1 Yes 2 No 7 don't know 8 refusal
CCC_051	Do you have arthritis or rheumatism, excluding fibromyalgia?	1 Yes 2 No 7 don't know 8 refusal 9 not stated

CCC_061	Do you have back problems, excluding fibromyalgia and arthritis?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
CCC_071	Do you have high blood pressure?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
CCC_072	Have you ever been diagnosed with high blood pressure?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CCC_073	In the past month, have you taken any medicine for high blood pressure?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
CCC_081	Do you have migraine headaches? (diagnosed)	1 Yes 2 No 7 don't know 8 refusal 9 not stated
CCC_91E	(Do you have) emphysema?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CCC_91F	(Do you have) chronic obstructive pulmonary disease (COPD)?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
CCC_101	Do you have diabetes? (diagnosed)	1 Yes 2 No 7 don't know 8 refusal 9 not stated

CCC_121	Do you have heart disease?	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_131	(Do you have) cancer?	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_31A	Have you ever been diagnosed with cancer?	1 Yes 2 No 6 not applicable 7 don’t know 8 refusal 9 not stated
CCC_141	Do you have intestinal or stomach ulcers? (diagnosed)	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_151	Do you suffer from the effects of a stroke?	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_161	(Do you suffer) from urinary incontinence?	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_171	Do you suffer from a bowel disorder such as Crohn's Disease, ulcerative colitis, irritable bowel syndrome or bowel incontinence?	1 Yes 2 No 7 don’t know 8 refusal 9 not stated
CCC_181	Do you have Alzheimer's Disease or any other dementia?	1 Yes 2 No 6 not applicable 7 don’t know 8 refusal 9 not stated
CCC_280	Do you have a mood disorder such as depression, bipolar disorder, mania or dysthymia? (diagnosed)	1 Yes 2 No 7 don’t know 8 refusal

		9 not stated
CCC_290	Do you have an anxiety disorder such as a phobia, obsessive-compulsive disorder or a panic disorder?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
	Health utility index (HUI) Module	
HUIDHSI	Health utilities index - (D)	-0.285 - 1.000 index score 99.996 not applicable 99.999 not stated
	Pain and discomfort (HUP) Module	
HUP_01	Are you usually free of pain or discomfort?	1 Yes 2 No 7 don't know 8 refusal
HUPDPAD	Pain (function code) - (D)	1 no pain or discomfort 2 pain prevents no activities 3 pain prevents a few activities 4 pain prevents some activities 5 pain prevents most activities 9 not stated
	Health care utilization (HCU)	
HCU_1AA	Do you have a regular medical doctor?	1 Yes 2 No 7 don't know 8 refusal
HCU_1BA	Reason has no regular doctor - no one available in area	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
HCU_1BB	Reason has no regular doctor - none taking new patients	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
HCU_1BC	Reason has no regular doctor - not tried to contact one	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated

HCU_1BD	Reason has no regular doctor - has left or retired	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
HCU_1BE	Reason has no regular doctor - other	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
HCU_1A1	Is there a place that you usually go to when you are sick or need advice about your health?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
HCU_1A2	What kind of place is it?	1 Doctor's office 2 Community health centre / CLSC 3 Walk-in clinic 4 Appointment clinic 5 Telephone health line 6 Hospital emergency room 7 Hospital outpatient clinic 8 Other – Specify 96 not applicable 97 don't know 98 refusal 99 not stated
HCU_1AC	Do you and this doctor usually speak in English, in French, or in another language?	1 English 2 French 3 Arabic 4 Chinese 5 Cree 6 German 7 Greek 8 Hungarian 9 Italian 21 Russian 10 Korean 22 Tamil 11 Persian (Farsi) 23 Other - Specify 12 Polish 13 Portuguese 14 Punjabi 15 Spanish 16 Tagalog (Filipino)

		17 Ukrainian 18 Vietnamese 19 Dutch 20 Hindi 21 Russian 22 Tamil 23 Other 96 not applicable 97 don't know 98 refusal 99 not stated
HCU_02AA	Consulted with family doctor/general practitioner (in the past 12 months)	1 Yes 2 No 7 don't know 8 refusal 9 not stated
HCU_02A	How many times (in the past 12 months)?	0 – 247 997 don't know 998 refusal 999 not stated
HCU_03A	Where did the most recent contact take place?	1 Doctor's office 2 Hospital emergency room 3 Hospital outpatient clinic (e.g. day surgery, cancer) 4 Walk-in clinic 5 Appointment clinic 6 Community health centre / CLSC 7 At work 8 At school 9 At home 10 Telephone consultation only 11 Other – Specify 96 not applicable 97 don't know 98 refusal 99 not stated
HCU_02BB	Consulted with eye specialist	1 Yes 2 No 7 don't know 8 refusal 9 not stated
HCU_02B	Number of consultations - eye specialist	0 – 50 997 don't know 998 refusal 999 not stated

HCU_02CC	Consulted with other medical doctor (specialists)	1 Yes 2 No 7 don't know 8 refusal 9 not stated
HCU_02C	Number of consultations - other medical doctor	0 – 300 997 don't know 998 refusal 999 not stated
HCU_03C	Where did the most recent contact take place?	1 Doctor's office 2 Hospital emergency room 3 Hospital outpatient clinic (e.g. day surgery, cancer) 4 Walk-in clinic 5 Appointment clinic 6 Community health centre / CLSC 7 At work 8 At school 9 At home 10 Telephone consultation only 11 Other – Specify 96 not applicable 97 don't know 98 refusal 99 not stated
HCU_02DD	Consulted with nurse	1 Yes 2 No 7 don't know 8 refusal 9 not stated
HCU_02D	Number of consultations - nurse	0 – 366 997 don't know 999 not stated
HCU_03D	Where did the most recent contact take place?	1 Doctor's office 2 Hospital emergency room 3 Hospital outpatient clinic (e.g. day surgery, cancer) 4 Walk-in clinic 5 Appointment clinic 6 Community health centre / CLSC 7 At work 8 At school 9 At home 10 Telephone consultation only 11 Other – Specify 96 not applicable

		97 don't know 98 refusal 99 not stated
HCUDMDC	Number of consultations with medical doctor - (D)	0 – 301 number of consultations 999 not stated
HCUFCOP	Consultations with health professionals - (F)	1 Yes 2 No 9 not stated
	Home care services (HMC)	
HMC_09	Received home care services - cost covered by government (past 12 months)	1 Yes 2 No 6 not applicable 7 don't know 8 refusal
HMC_14	Self-perceived unmet home care needs	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
	Patient satisfaction – Health care services (PAS)	
PAS_11	In the past 12 months, have you received any health care services?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
PAS_12	Rating of quality of care received	1 excellent? 2 good? 3 fair? 4 poor? 6 not applicable 7 don't know 8 refusal 9 not stated
PAS_13	Satisfaction with way care provided	1 very satisfied? 2 somewhat satisfied? 3 neither satisfied nor dissatisfied? 4 somewhat dissatisfied? 5 very dissatisfied? 6 not applicable 7 don't know 8 refusal 9 not stated

PAS_21A	Received health care services at hospital	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
PAS_22	Rating of quality of care received - hospital	1 excellent? 2 good? 3 fair? 4 poor? 6 not applicable 7 don't know 9 not stated
PAS_23	Satisfaction with way care provided - hospital	1 very satisfied? 2 somewhat satisfied? 3 neither satisfied nor dissatisfied? 4 somewhat dissatisfied? 5 very dissatisfied? 6 not applicable 7 don't know 9 not stated
PAS_31A	Received physician care	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
PAS_31B	Type of physician - most recent care	1 a family doctor (general practitioner) 2 a medical specialist 6 not applicable 7 don't know 9 not stated
PAS_32	Rating of quality of care received - physician	1 excellent? 2 good? 3 fair? 4 poor? 6 not applicable 7 don't know 8 refusal 9 not stated
PAS_33	Satisfaction with way care provided - physician	1 very satisfied? 2 somewhat satisfied? 3 neither satisfied nor dissatisfied? 4 somewhat dissatisfied? 5 very dissatisfied? 6 not applicable

		7 don't know 8 refusal 9 not stated
	Patient satisfaction – Community-based care (PSC)	
PSC_1	In the past 12 months, have you received any community-based care?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
PSC_2	Overall, how would you rate the quality of the community-based care you received? Would you say it was:	1 excellent? 2 good? 3 fair? 4 poor? 6 not applicable 7 don't know 9 not stated
PSC_3	Overall, how satisfied were you with the way community-based care was provided? Were you:	1 very satisfied? 2 somewhat satisfied? 3 neither satisfied nor dissatisfied? 4 somewhat dissatisfied? 5 very dissatisfied? 6 not applicable 7 don't know 9 not stated
	Restriction of activities (RAC)	
RAC_1	Do you have any difficulty hearing, seeing, walking, communicating, climbing stairs, bending, learning or doing any similar activities:	1 sometimes 2 often 3 never 7 don't know 8 refusal
RACDIMP	Impact of health problems - (D)	1 sometimes 2 often 3never 9 not stated
	Health prevention	
FLU_160	Have you ever had a flu shot?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
BPC_010	Have you ever had your blood pressure taken?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal

		9 not stated
PACDFR	Frequency of all leisure physical activity > 15 min. - (D)	1 regular 2 occasional 3infrequent 9 not stated
PACDPAI	Leisure physical activity index - (D)	1 active 2 moderately active 3 inactive 9 not stated
	Satisfaction with life (SWL)	
SWLFOPT	Satisfaction with life	1 yes 2 no
SWL_05	How satisfied are you with yourself?	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 6 not applicable 7 don't know 8 refusal 9 not stated
SWL_07	How satisfied are you with your relationships with other family members?	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 6 not applicable 7 don't know 8 refusal 9 not stated
SWL_08	How satisfied are you with your relationships with friends?	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 6 not applicable 7 don't know 8 refusal 9 not stated
SWL_09	How satisfied are you with your housing?	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 6 not applicable 7 don't know

		8 refusal 9 not stated
SWL_10	How satisfied are you with your neighbourhood?	1 Very satisfied 2 Satisfied 3 Neither satisfied nor dissatisfied 4 Dissatisfied 5 Very dissatisfied 6 not applicable 7 don't know 8 refusal 9 not stated
	Psychological well-being (PWB)	
WSTFOPT	Work stress - (F)	1 yes 2 no
SFEFOPT	Self-esteem - (F)	1 yes 2 no
SMK_01A	In your lifetime, have you smoked a total of 100 or more cigarettes (about 4 packs)?	1 yes 2 no 7 don't know 8 refusal
SMK_202	At the present time, do you smoke cigarettes daily, occasionally or not at all?	1 Daily 2 Occasionally 3 Not at all 7 don't know 8 refusal 9 not stated
SMKDSTY	Type of smoker - (D)	1 daily smoker 2 occasional smoker (former daily smoker) 3 always an occasional smoker 4 former daily smoker 5 former occasional smoker 6 never smoked 99 not stated
ALCDTTM	Type of drinker (12 months) - (D)	1 regular drinker 2 occasional drinker 3 did not drink in the last 12 months 9 not stated
DPSFOPT	Depression - (F)	1 yes 2 no
DPSDSF	Depression scale - short form score - (D)	0 – 8 short form score 96 not applicable 99 not stated
SUIFOPT	Suicidal thoughts and attempts - (F)	1 yes 2 no

Social support - Availability (SSA)

SSAFOPT	Social support - availability - (F)	1 yes 2 no
SSA_01	About how many close friends and close relatives do you have, that is, people you feel at ease with and can talk to about what is on your mind?	0-99 Number 6 not applicable 7 don't know 8 refusal 9 not stated
SSA_02	Has someone to give help if confined to bed	1 None of the time 2 A little of the time 3 Some of the time 4 Most of the time 5 All of the time 6 not applicable 7 don't know 8 refusal 9 not stated
SSA_Q05	Has someone to take to doctor	1 None of the time 2 A little of the time 3 Some of the time 4 Most of the time 5 All of the time 6 not applicable 7 don't know 8 refusal 9 not stated
SSA_06	Has someone who shows love and affection	1 None of the time 2 A little of the time 3 Some of the time 4 Most of the time 5 All of the time 6 not applicable 7 don't know 8 refusal 9 not stated
SSA_12	Has someone to prepare meals	1 None of the time 2 A little of the time 3 Some of the time 4 Most of the time 5 All of the time 6 not applicable 7 don't know 8 refusal 9 not stated

SSA_15	Has someone to help with daily chores if sick	1 None of the time 2 A little of the time 3 Some of the time 4 Most of the time 5 All of the time 6 not applicable 7 don't know 8 refusal 9 not stated
	Social support - Utilization (SSU)	
SSUFOPT	Social Support - utilization - (F)	1 yes 2 no
SSU_21A	In the past 12 months, did you receive the following support?	1 yes 2 no 6 not applicable 7 don't know 8 refusal 9 not stated
SSU_21B	When you needed it, how often did you receive this kind of support (in the past 12 months)?	1 Almost always 2 Frequently 3 Half the time 4 Rarely 5 Never 6 not applicable 7 don't know 8 refusal 9 not stated
	Spiritual values (SPV)	
SPVFOPT	Spiritual values - (F)	1 yes 2 no
SPV_1	Do spiritual values play an important role in your life?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
SPV_2	To what extent do your spiritual values help you to find meaning in your life?	1 A lot 2 Some 3 A little 4 Not at all 6 not applicable 7 don't know 8 refusal 9 not stated
SPV_3	To what extent do your spiritual values give you the	1 A lot 2 Some

	strength to face everyday difficulties?	3 A little 4 Not at all 6 not applicable 7 don't know 8 refusal 9 not stated
SPV_4	To what extent do your spiritual values help you to understand the difficulties of life?	1 A lot 2 Some 3 A little 4 Not at all 6 not applicable 7 don't know 8 refusal 9 not stated
SPV_5	What, if any, is your religion?	1 No religion (Agnostic, Atheist) 2 Roman Catholic 3 Ukrainian Catholic 4 United Church 5 Anglican 6 Presbyterian 7 Lutheran 8 Baptist 9 Pentecostal 10 Eastern Orthodox 11 Jewish 12 Islam (Muslim) 13 Hindu 14 Buddhist 15 Sikh 16 Jehovah's Witness 17 Other – Specify 96 not applicable 97 don't know 98 refusal 99 not stated
SPV_6	Not counting events such as weddings or funerals, during the past 12 months, how often did you participate in religious activities or attend religious services or meetings?	1 Once a week or more 2 Once a month 3 3 or 4 times a year 4 Once a year 5 Not at all 6 not applicable 7 don't know 8 refusal 9 not stated
SPV_7	In general, would you say that you are:	1 very religious? 2 religious?

		3 not very religious? 4 not religious at all? 6 not applicable 7 don't know 8 refusal 9 not stated
	Access to health care services (ACC)	
ACC_Q10	In the past 12 months, did you require a visit to a medical specialist for a diagnosis or a consultation?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_11	In the past 12 months, did you ever experience any difficulties getting the specialist care you needed for a diagnosis or consultation?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
ACC_21	In the past 12 months, did you ever experience any difficulties getting the surgery you needed?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
ACC_30	In the past 12 months, did you require one of these tests? (non emergency MRIs, CAT Scans and angiographies)	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_31	In the past 12 months, did you ever experience any difficulties getting the tests you needed?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
ACC_40	In the past 12 months, have you required health information or advice for yourself or a family member?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_41	In the past 12 months, did you ever experience any difficulties getting the health information or advice you	1 Yes 2 No 6 not applicable 7 don't know 9 not stated

	needed for yourself or a family member?	
ACC_50A	Do you have a regular family doctor?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_50	In the past 12 months, did you require any routine or on-going care for yourself or a family member?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_51	In the past 12 months, did you ever experience any difficulties getting the routine or on-going care you or a family member needed?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
ACC_60	In the past 12 months, have you or a family member required immediate health care services for a minor health problem?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
ACC_61	In the past 12 months, did you ever experience any difficulties getting the immediate care needed for a minor health problem for yourself or a family member?	1 Yes 2 No 6 not applicable 7 don't know 9 not stated
	Socio-demographic characteristics (SDC)	
SDC_1	In what country were you born?	1 Canada 2 China 3 France 4 Germany 5 Greece 6 Guyana 7 Hong Kong 8 Hungary 9 India 10 Italy 11 Jamaica 12 Netherlands / Holland 13 Philippines

		14 Poland 15 Portugal 16 United Kingdom 17 United States 18 Viet Nam 19 Sri Lanka 20 Other – Specify 97 don't know 98 refusal 99 not stated
SDC_2	Were you born a Canadian citizen?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
SDC_3	In what year did you first come to Canada to live?	1914 – 2007 year 9996 not applicable 9997 don't know 9998 refusal 9999 not stated
SDC_41	Are you an Aboriginal person, that is, North American Indian, Métis or Inuit?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
SDC_43A	People living in Canada come from many different cultural and racial backgrounds. Are you white?	1 yes 2 no 6 not applicable 7 don't know 8 refusal 9 not stated
SDC_5A	In what languages can you conduct a conversation? - English	1 yes 2 no 7 don't know 8 refusal 9 not stated
SDC_5B	In what languages can you conduct a conversation? - French	1 yes 2 no 7 don't know 8 refusal 9 not stated
SDC_5AA	What language do you speak most often at home? - English	1 yes 2 no 7 don't know 8 refusal

		9 not stated
SDC_5AB	What language do you speak most often at home? - French	1 yes 2 no 7 don't know 8 refusal 9 not stated
SDC_6A	What is the language that you first learned at home in childhood and can still understand? - English	1 yes 2 no 7 don't know 8 refusal 9 not stated
SDC_6B	What is the language that you first learned at home in childhood and can still understand? - French	1 yes 2 no 7 don't know 8 refusal 9 not stated
SDCGCB	Country of birth - (G)	1 Canada 2 Other North America 3 South, Central America and Caribbean 4 Europe 5 Africa 6 Asia 7 Oceania 9 Not stated
SDCDAIM	Age at time of immigration - (D)	0 – 85 years 996 not applicable 999 not stated
SDCFIMM	Immigrant - (F)	1 yes 2 no 9 not stated
SDCDRES	Length of time in Canada since immigration - (D)	0 – 93 years 996 not applicable 999 not stated
SDCDABT	Aboriginal identity - (D)	1 Aboriginal 2 not Aboriginal 9 not stated
SDCDLNG	Languages - can converse - (D)	1 English only 2 French only 3 English and French only 4 English and French and other 5 English and other (not French) 6 French and other (not English) 7 Neither English nor French 99 Not stated

SDCDFL1	First official language learned and still understood - (D)	1 English only 2 French only 3 English and French only 4 English and French and other 5 English and other (not French) 6 French and other (not English) 7 Neither English nor French 99 Not stated
SDCDLHM	Language(s) spoken at home - (D)	1 English only 2 French only 3 English and French only 4 English and French and other 5 English and other (not French) 6 French and other (not English) 7 Neither English nor French 99 Not stated
	Education (EDU)	
EDU_2	Did you graduate from high school (secondary school)?	1 Yes 2 No 6 not applicable 7 don't know 8 refusal 9 not stated
EDU_3	Have you received any other education that could be counted towards a degree, certificate or diploma from an educational institution?	1 Yes 2 No 7 don't know 8 refusal 9 not stated
EDU_4	What is the highest degree, certificate or diploma you have obtained?	1 No post-secondary degree, certificate or diploma 2 Trade certificate or diploma from a vocational school or apprenticeship training 3 Non-university certificate or diploma from a community college, CEGEP, school of nursing, etc. 4 University certificate below bachelor's level 5 Bachelor's degree 6 University degree or certificate above bachelor's degree 96 not applicable 97 don't know 98 refusal 99 not stated

EDUDH04	Highest level of education – household, 4 levels - (D)	1 less than secondary school graduation 2 secondary school graduation 3 some post-secondary 4 post-secondary graduation 9 not stated
EDUDR04	Highest level of education - respondent, 4 levels - (D)	1 less than secondary school graduation 2 secondary school graduation 3 some post-secondary 4 post-secondary graduation 9 not stated
	Labour force (LF2)	
LBS_01	Worked at job or business last week	1 Yes 2 No 3 Permanently unable to work 6 not applicable 7 don't know 8 refusal 9 not stated
	Household Characteristics	
DHHDHSZ	Household size - (D)	1 – 16 number of persons
DHHDL12	Number of persons less than 12 years old in household - (D)	0 – 8 number of persons
	Dwelling characteristics (DWL)	
DHHDDWE	What type of dwelling do you live in? Is it a:	01 single detached? 02 double? 03 row or terrace? 04 duplex? 05 low-rise apartment of fewer than 5 stories or a flat? 06 high-rise apartment of 5 stories or more? 07 institution? 08 hotel; rooming/lodging house; camp? 09 mobile home? 10 other – Specify 96 not applicable 99 not stated
DHH_OWN	Dwelling - owned by a member of household	1 Yes 2 No 7 don't know 8 refusal 9 not stated
	Income (INC)	
INCDHH	Total household income from all sources - (D)	1 no income 2 less than $5,000

		3 $5,000 to $9,999 4 $10,000 to $14,999 5 $15,000 to $19,999 6 $20,000 to $29,999 7 $30,000 to $39,999 8 $40,000 to $49,999 9 $50,000 to $59,999 10 $60,000 to $79,999 11 $80,000 to $99,999 12 $100,000 or more 99 not stated
INCDPER	Total personal income from all sources - (D)	1 no income 2 less than $5,000 3 $5,000 to $9,999 4 $10,000 to $14,999 5 $15,000 to $19,999 6 $20,000 to $29,999 7 $30,000 to $39,999 8 $40,000 to $49,999 9 $50,000 to $59,999 10 $60,000 to $79,999 11 $80,000 to $99,999 12 $100,000 or more 96 not applicable 99 not stated

Appendix G: Government of Saskatchewan French-Language Services Policy

GOVERNMENT OF SASKATCHEWAN
FRENCH-LANGUAGE SERVICES POLICY

Saskatchewan Office of the Provincial Secretary

Francophone Affairs Branch 1855 Victoria Avenue

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May 2009

INTRODUCTION

According to 2001 Census data, Saskatchewan's Francophones, known as the Fransaskois, make up approximately 2% of the province's population, while the province's bilingualism rate stands at 5.1% based on people reporting knowledge of both French and English. Francophones in Saskatchewan are spread throughout the province in both urban and rural areas. As is the case in many rural communities in Saskatchewan, a large part of the population from Francophone areas has moved to major urban centres.

Francophones are an important component of the province's linguistic duality and play an active role in Saskatchewan's economic, cultural and social development. In agriculture, business, the service sector and in many other parts of the Saskatchewan economy, the Fransaskois have shown and continue to show a great sense of leadership and initiative which contributes to the economic vitality of Saskatchewan.

To assist provincial government ministries, crown corporations and agencies in providing more services in French to the Francophone community, the Office of French Language Coordination, now known as the Francophone Affairs Branch (FAB), was established in 1990. Its main responsibilities include:

- liaison between the government and the Francophone community;
- support for provincial ministries, crown corporations and agencies in providing enhanced services in French;
- translation services to provincial ministries, crown corporations and agencies;
- support to the minister responsible for Francophone affairs.

In addition to meeting its constitutional and statutory obligations, the Government of Saskatchewan pursues targeted initiatives to respond to needs identified by the Francophone community. This is an approach that is taken in many other provinces and territories throughout Canada. The enclosed French-language services policy statement is intended to be a constructive means for provincial ministries, crown corporations and agencies to support the Fransaskois community's development and vitality.

FAB is responsible for developing the policy guidelines and a workable timeframe for the achievement of the service goals in consultation with provincial ministries, crown corporations and other agencies.

GOVERNMENT OF SASKATCHEWAN FRENCH-LANGUAGE SERVICES POLICY

PURPOSE

The Government of Saskatchewan recognizes that linguistic duality is a fundamental characteristic of Canada and that Saskatchewan's Francophone community is an important component of that linguistic duality. We acknowledge the long-standing and continuing contribution of Saskatchewan's Francophone community to the social, cultural and economic development of this province.
The Government of Saskatchewan is committed to enhancing the services offered to Saskatchewan's Francophone community in support of the development and vitality of this community.

SERVICE GOALS

Communication

That correspondence with individuals or groups be carried out in the official language preferred by the client.

- That print and electronic information material and forms, intended for the general public, along with identity documents and certificates, be provided in a bilingual format when appropriate. The choice of documents will be determined in consultation with the Francophone community and subject to cost and distribution considerations.
- That public notices and signs in both official languages be posted where appropriate.

That public information campaigns be conducted in the French language when such campaigns are conducted in English when appropriate. The choice of public information campaign will be determined in consultation with the Francophone community and subject to cost and distribution considerations.

Service delivery and development

- That the designation of bilingual positions be considered as a means to more effectively provide French-language services.
- That the inclusion of a French-language services component be considered when new Government of Saskatchewan programs and services are being developed.
- That the "active offer" approach be used when services are offered in French.
- ("Active offer" means that the service is publicized to potential users, that the general public is encouraged to use the service and is comfortable doing so, and that the service quality is comparable to that of the service provided in English.)

Consultation

- That appointments to provincial boards, commissions, agencies, and other bodies consider representation from the Francophone community when discussions touch on sectors with a direct impact on this community's development.
- That the Advisory Committee on Francophone Affairs serves a consultancy role in the implementation of this policy.

APPLICATION

This policy applies to the provincial government, its ministries, crown corporations and other agencies.

Under the direction of the Minister responsible for Francophone Affairs, the Francophone Affairs Branch (FAB) of the Office of the Provincial Secretary is mandated to guide and monitor the implementation of this policy.

The FAB will develop a workable timeframe for the achievement of the service goals, in consultation with provincial ministries, crown corporations and other agencies. As well as providing translation and advisory services, the FAB will draft realistic guidelines in consultation with the provincial government ministries, crown corporations and other agencies to achieve the service goals set out in this policy, keeping in mind financial considerations.

The FAB will publish an annual report on French-language services detailing progress in order to ensure public accountability.

EVALUATION

This policy will be evaluated within five years of the date of implementation. This evaluation will be carried out by the Francophone Affairs Branch in consultation with the Advisory Committee on Francophone Affairs.

Appendix H: Permission from journal editor to include article I in the thesis

Minorités linguistiques et société
Revue de l'Institut canadien de recherche en minorités linguistiques

Linguistic Minorities and Society
Journal of the Canadian Institute for Research on Linguistic Minorities

March 4, 2014

Mr. Hubert Alimezelli
Doctoral candidate
University of Saskatchewan

Dear Mr. Alizemelli,

I hereby wish to inform you that you are granted the permission to include in your doctoral dissertation your refereed and soon to be published article, **Determinants of self-rated health of Francophone seniors in a minority situation in Canada**.

I thank you for your cooperation as well as that of your co-authors in all matters related to the publication of this article.

Sincerely,

Réal Allard
Directeur , Minorités linguistiques et société
Director, Linguistic Minorities and Society

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